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THE "SMALL CHANGE" OF SOLDIERING?
PEACE OPERATIONS AS PREPARATION FOR FUTURE WARS

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

by

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B.S., U.S.M.A., West Point, New York, 1983
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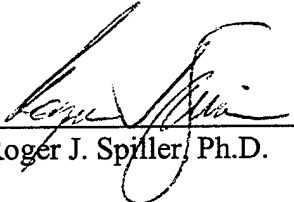
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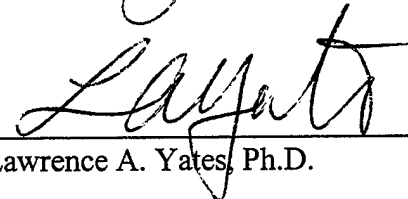
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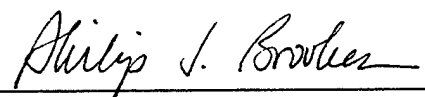
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement)

ABSTRACT

THE "SMALL CHANGE" OF SOLDIERING? PEACE OPERATIONS AS
PREPARATION FOR FUTURE WARS by Major Mark S. Martins, U.S. Army,
270 pages.

This paper examines the effects of peace operations on the warfighting capability of U.S. Army combat forces. It focuses upon operations in the Sinai, Somalia, Haiti, Macedonia, and Bosnia, and relies upon survey data, unit status reports, interviews, historical accounts, after action reports, and other sources.

If properly exploited, peace operations can provide valuable preparation for future wars. Such operations exercise a broad set of capabilities—particularly in the areas of command and control, planning, logistics, deployment, intelligence, and small unit tasks—that are essential to effectiveness across the range of military operations. Their strongest potential contribution to readiness lies in the cultivation of human factors, such as self-discipline, initiative, decision-making ability, leadership skills, unit cohesion, and endurance. Moreover, their contribution to endurance appears to be duplicated by no other form of peacetime training.

A view nevertheless persists that peace operations detract from the Army's primary mission. This view is rooted in a paradigm of readiness that assumed its present form during General William E. DePuy's tenure at U.S. Army Training and Doctrine Command. The paper assesses the strengths and weaknesses of this paradigm and suggests an alternative that better accounts for human and other factors integral to readiness.

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LIST OF ABBREVIATIONS

AAR	After Action Review
AEF	American Expeditionary Force
ALO	authorized level of organization
ARTEP	Army Training and Evaluation Program
BCTP	Battle Command Training Program
CALL	Center for Army Lessons Learned
CINC	commander-in-chief
CMTC	Combat Maneuver Training Center
C-rating	Category-of-readiness rating
CTC	Combat Training Center
FMC	fully mission capable
GAO	General Accounting Office
GHQ	General Headquarters
HMMWV	High-Mobility, Multipurpose Wheeled Vehicle
HQDA	Headquarters, Department of the Army
JRTC	Joint Readiness Training Center
METL	mission essential task list
MOOTW	military operations other than war
MRC	major regional contingency
MTOE	modified table of organization and equipment
MTW	major theater war

NCA	National Command Authorities
NCO	noncommissioned officer
NSIAD	National Security and International Affairs Division
NTC	National Training Center
OJCS	Organization of the Joint Chiefs of Staff
OPFOR	opposing force
OOTW	operations other than war
PLA	People's Liberation Army
SAMS	School of Advanced Military Studies
TOW	Tube-launched, Optically tracked, Wire-guided missiles
TRADOC	U.S. Army Training and Doctrine Command
USR	unit status report
ZOS	Zone of Separation

CHAPTER 1

INTRODUCTION

For there is a fundamental difference between the sort of sporadic, small-scale fighting which is the small change of soldiering and the sort we characterize as a battle.

John Keegan, *The Face of Battle*

This paper is a study of how peace operations may affect the ability of U.S. Army combat forces to fight in wars.¹ The word “may” is important. Predicting the performance of a military force at war against an unknown enemy, in unknown strength, with unknown objectives, on unknown terrain is no exact science. The following scene from a hypothetical future war serves both to stimulate concrete analysis and to suggest the many large gaps in knowledge that assumptions must fill.

¹ Although it will be necessary to place the definition within a broader context at various junctures in this paper, “peace operations” will be used initially as official Army doctrine defines the term. Thus, it will be “an umbrella term that encompasses three types of activities: activities with [a] predominantly diplomatic lead (preventive diplomacy, peacemaking, peace building) and two complementary, predominantly military, activities (peacekeeping and peace-enforcement).” U.S. Department of the Army, *Field Manual 100-23, Peace Operations* (Fort Monroe, VA: Dec. 1994), 111. “Peace-enforcement” will be “the application of military force, or the threat of its use, . . . pursuant to international authorization, to compel compliance with resolutions or sanctions designed to maintain or restore peace and order.” *Ibid.* “Peacekeeping” will be “military or paramilitary operations that are undertaken with the consent of all major belligerents . . . [consisting of] monitor[ing] and facilitat[ing] implementation of an existing truce and support [to] diplomatic efforts to reach long-term political settlement.” *Ibid.* at 112. For discussion of the relationship between peace operations thus defined, other nontraditional operations, and war, see below notes 360-405 and accompanying text.

Another Task Force Smith?

Lieutenant Colonel Chris Myth studied the morning landscape through his binoculars.² Only a few of the tanks and infantry fighting vehicles in the battalion-sized task force he commanded could still be seen behind their camouflage. His soldiers, proud members of the fabled 1st Cavalry Division, continued to work on hiding their fighting positions. The date was 5 July 2000. The landscape Myth studied was the Chagang-do province of North Korea. His eyes moved methodically along the road that ran from his front toward the northwest, where only thirty miles away—beyond Myth's view—the road crossed the Yalu River and entered China.

² I am indebted to Dr. Gary Bjorge and to Majors Jeff Ballmer, Dale Jones, and Victor Solero for their assistance in giving this scene realism and plausible detail. In addition, I relied on the following sources to develop the scene: U.S. Department of the Army, U.S. Army Training and Doctrine Command, *Field Manual 100-7-1: Army Pre-Positioned Afloat Operations* (Washington, D.C.: 1996); Central Intelligence Agency, *World Factbook* (1996) (entries and maps on North Korea and China); "Defence—China," in *Jane's Sentinel: China and North-East Asia* (Alexandria, VA: Jane's Information Group Ltd., 1995), 16-35; "China," in Institute for National Strategic Studies, "Strategic Assessment 1997" (Washington, D.C.: INSS, 1997); U.S. Army Command and General Staff College, *Student Text 100-3: Battle Book* (Fort Leavenworth, KS: Jul. 1997), 2-1 to 2-21, 9-1, 10-1 to 10-36; "China Aims to Gain on U.S. Arms," *Kansas City Star*, 19 Sept. 1997; Jonathon Wright, "Aid Group: North Korean Famine Worse Than Thought," *Reuters News Service*, 16 Sept. 1997; Michael D. Swaine, "Chinese Military Modernization: Motives, Objectives, and Requirements," in *China's Economic Future: Challenges to U.S. Policy* (Santa Monica, CA: RAND Corporation, 1997), 320-338; Central Intelligence Agency, *World Factbook* (1996) (including entries and maps on North Korea and China); P. Young, Main Battle Tanks, Light Tanks, and Helicopters of the Peoples Liberation Army [database online], available from <http://www.cs.umanitoba.ca/~jdeng/english/chinamil/index.htm>; Internet; accessed 25 November 1997 (hardcopy of this otherwise unpublished material in possession of author).

Myth's task force had arrived on the Korean peninsula two weeks earlier. The fourteen M-1 Abrams Tanks, thirty M-2 Bradley Fighting Vehicles, and assorted equipment and supplies that would outfit the task force rolled onto docks in Pusan harbor from ships pre-positioned at sea. From Pusan, the vehicles, equipment, and supplies moved by rail to Seoul. The men of the task force flew by military airlift from Fort Hood, Texas, to Osan Air Force Base near Seoul, where they joined their new vehicles. After three days of inspections, minor repairs, and uploading of fuel and other supplies, the task force roadmarched northward. In a column that often stretched five miles, Task Force Myth—as the men liked to call the impressive formation—steadily rode out of Seoul on heavy equipment transports, across the demilitarized zone between South and North Korea, through Pyongyang, to Kanggye, the capitol of Chagang-do province.

Lieutenant Colonel Myth's mission, which he received upon arriving in Chagang-do, was to defend against an expected attack by forces of the Chinese People's Liberation Army (PLA). Before arriving, he had received the mission to provide security for humanitarian relief workers who were distributing food to starving North Korean villagers. In May of the year 2000, a United Nations Security Council resolution called upon a multinational force, led by the United States, to use all necessary means to secure the distribution of aid throughout the famine-stricken, unstable country. The North Korean government—led by men who in late 1999 toppled dictator Kim Jong-Il—approved the United Nations action and invited the multinational force to assist the international relief effort.

Reluctant for U.S. forces to be operating so close to its border, China had abstained from the Security Council vote on the resolution. Later, China issued dark warnings against the deployment of a multinational force to North Korea, placed its northeastern Army Group on alert, and began a series of maneuvers near its border with North Korea. As Task Force Myth rumbled north out of Kanggye into hasty defensive positions on the outskirts of the city, Chinese artillery could be heard across the Yalu, pounding hillsides on nearby training ranges.

Exactly fifty years earlier, enemy tanks charging southward near Osan, South Korea had overrun a battalion task force commanded by Lieutenant Colonel Brad Smith. Lacking in adequate training, ammunition, and antitank weaponry, the earlier task force was to become in the 1990s a popular case study in unpreparedness.³

Seemingly well-armed and equipped, Task Force Myth had deployed to its battle positions in North Korea almost immediately after conducting peace operations in Bosnia. For the first six months of the new millenium, most of the soldiers in the task force had helped keep the fragile Bosnian peace first established in December of 1995,

³ See, for example, T.R. Fehrenbach, *This Kind of War: A Case Study in Unpreparedness* (New York: Macmillan, 1963), 97-107; Roy K. Flint, "Task Force Smith and the 24th Division: Delay and Withdrawal, 5-19 July 1950," in *America's First Battles*, ed. Charles E. Heller and William A. Stofft (Lawrence, KS: Univ. of Kansas Press, 1986), 266-99. In 1992, a widely distributed videotaped presentation on the challenges of downsizing the Army included the emphatic statement by the Chief of Staff of the Army that "[t]here will be no more Task Force Smiths!" Leonard Wong and Jeffrey McNally, "Downsizing the Army: Some Policy Implications Affecting the Survivors," *Armed Forces and Society* 2, no. 20 (Winter 1994): 199, n. 10, quoting General Gordon Sullivan in "The Changing Army" (Washington, D.C.: U.S. Army Visual Information Center, 1992) (A0122-VTC-92-00022).

when the North Atlantic Treaty Organization began implementing an accord signed by the three major warring factions.⁴ Commander and men had been home at Fort Hood only a week when they received the ominous order to fly to Korea. As Lieutenant Colonel Myth finished scanning the horizon, he silently wondered whether the arduous but mostly nonviolent operations in Bosnia had left him and his soldiers prepared for heavy fighting. The tank and Bradley crews had received only limited gunnery and maneuver training during the six-month tour. They were bound to be rusty in these skills. Still, Myth had also noticed quantum improvements in his soldiers' discipline, initiative, leadership, and decision-making. These countervailing virtues were hard to measure.

Myth put down the binoculars and crawled inside his Bradley. The radio promptly cackled with the voice of his intelligence officer. "Sir," came the voice, "they're coming. An unmanned aerial vehicle sent out by brigade headquarters twenty minutes ago spotted Type 79 PLA tanks in battle formation just south of the Yalu and heading our way." Even before the intelligence officer's report ended, Myth heard the roar of aircraft overhead and emerged from his Bradley to spot two A-10 Thunderbolt aircraft flying low and fast toward the northwest, their wings bristling with missiles intended for the advancing PLA tanks. As the noise from the aircraft faded, Myth could hear and see Chinese missiles and artillery striking the ground less than two kilometers ahead of his most forward positions.

⁴ Appendix A contains the essential facts surrounding Operations Joint Endeavor and Joint Guard conducted by North Atlantic Treaty Organization forces in Bosnia-Herzegovina from December of 1995 to the present.

As war once again began to engulf the Korean Peninsula, U.S. leaders in Washington, D.C. were anxiously questioning whether post-Cold War peace operations had degraded or enhanced the military's ability to win a shooting war such as this. How had the six-month assignment to Bosnia affected Chris Myth and his soldiers? More significant, how would Task Force Myth and the forces supporting it fare against the PLA, and why?

Peace Operations and Combat Readiness

This imagined scene from a future war raises questions that are among the most controversial and important in military affairs today. Congressional committees, administration officials, uniformed leaders, and military analysts hotly debate the effects of peace operations on combat readiness. Inferences about these effects serve as linchpins in influential modern arguments for or against the Army's role, missions, doctrine, training, equipment, force structure, and budget.

For example, some commentators who infer that peace operations degrade warfighting ability proceed to argue that the Army should not participate in peacekeeping, peace enforcement, or other operations in support of diplomatic efforts, lest these forces lose the combat edge.⁵ Others who infer that peace operations have no

⁵ See, for example, Harry Summers, "Powell Echoes Grant in Focusing Military," *Army Times* (Sept. 27, 1993), 78. Note that throughout this paper, unless otherwise stated or indicated by context, "combat" will mean "armed fighting or battle." *Webster's New World Dictionary of the English Language*, 1978 ed. s.v. "combat." "Battle," following Keegan, will mean that type of armed fighting that "obey[s] the dramatic unities of time, place and action. . . ." in that it seeks to secure a decision on an identifiable battlefield "within a fairly strict time limit." John Keegan, *The Face of Battle* (Middlesex: Penguin Books, 1976), 14 "Readiness" will connote the capability of an army or military to

appreciable positive or negative effects on warfighting prowess argue that the Army should embrace unorthodox missions, including peace operations—lest the United States lose opportunities to replace the rule of violence with the rule of law in disparate regions

achieve objectives set within national strategy. “Warfighting ability,” and “warfighting prowess” will be interchangeable with “readiness.” Although my use of the term “readiness” corresponds to its meaning in normal conversation and helps to point up a rigidity in traditional military thinking, it is important to note that such a use is broader than technical Department of Defense terminology. Purists schooled in force management employ “military capability” to describe what I am terming “readiness” and would reserve the latter term to describe a relatively short-term characteristic that expresses only one portion of that capability:

military capability—(DOD) The ability to achieve a specified wartime objective (win a war or battle, destroy a target set). It includes four major components: force structure, modernization, readiness, and sustainability.

- a. force structure—Numbers, size, and composition of the units that comprise our Defense forces; e.g., divisions, ships, airwings.
- b. modernization—Technical sophistication of forces, units, weapon systems, and equipments.
- c. readiness—The ability of forces, units, weapon systems, or equipments to deliver the outputs for which they were designed (includes the ability to deploy and employ without unacceptable delays).
- d. sustainability—The ability to maintain the necessary level and duration of operational activity to achieve military objectives. Sustainability is a function of providing for and maintaining those levels of ready forces, materiel, and consumables necessary to support military effort.

U.S. Department of Defense, *Joint Pub. 1-02: Dictionary of Military and Associated Terms* (Washington, D.C.: GPO, Dec. 1989), 228. A recent addition to the components of military capability, one not listed in the 1989 official definition, is “infrastructure and overhead,” which one authority describes as “installations, training base, and war production capacity/ability.” See U.S. Army Command and General Staff College, *C430 Text: Resource Planning and Force Management* (Fort Leavenworth: CGSC. January 1998), 18-2 (introducing the lesson on “Force Readiness” and describing the “five pillars” of military capability).

of the globe.⁶ Views about proper roles and missions for the Army, in turn, generate views about the proper focus of doctrinal field manuals, the emphasis of training, and the balance between light and armored forces.

Yet analysis of the crucial inferences about peace operations and warfighting ability reveal that these inferences are drawn from assumptions rather than from evidence. The purpose of this paper is to describe and then methodically challenge the dominant prevailing inferences and assumptions—to go slowly where others have tended to go fast. Survey data (existing as well as newly collected), unit status reports, interviews, historical accounts, and after action reports will provide the primary sources of evidence with which to fulfill this purpose. It is a worthy purpose, for the questions raised by our hypothetical Task Force Myth are not only controversial and important, they are difficult—and thus ill-suited to treatment by sound-bite.

Because the pace of peace operations shows no signs of slackening, the questions are also unlikely to go away. Since the entry into force in 1945 of the United Nations Charter, which established an apparatus for collective security and envisioned military operations ranging from peacekeeping and support of preventive diplomacy (Chapter VI) to peace enforcement (Chapter VII), more than thirty operations have taken place under United Nations auspices.⁷ This number does not include other military operations in

⁶ See, for example, James Burk, "Why Peacekeeping?" *Armed Forces and Society* 23, no. 3 (Spring 1997): 323-26.

⁷ Adam Roberts and Benedict Kingsbury, eds., *United Nations, Divided World: The UN's Roles in International Relations* (Oxford: Clarendon Press, 1994), 538-41.

support of diplomacy, such as the Multinational Force Observer (MFO) mission in the Sinai, which are sanctioned by the United Nations but carried out under separate agreements between member states. The end of the Cold War and, for the time being, the disappearance of the Russian veto from Security Council deliberations, has ensured a prominent role in peace operations for the United States, the lone remaining superpower. In the 1990s alone, peace operations have sent U.S. Army units to Iraq, Somalia, Haiti, Macedonia, Croatia, Eastern Slavonia, Hungary, Bosnia, and Rwanda.

The steady global demand for peace operations coincides with the persistent demand for U.S. participation in all types of operations short of war. Twenty years ago, a prominent study of U.S. military operations short of conventional war counted 215 overseas interventions between the years 1946 and 1975.⁸ Many of these included deployment of ground troops. A recent Congressional Research Service study counted an additional fifty-four overseas interventions short of war between 1981 and 1996.⁹ Sixteen of these occurred during the Reagan presidency, thirteen occurred during the Bush presidency, and twenty-five occurred during the first term of the Clinton presidency. One thing seems probable in an era of shrinking defense resources: the United States will be unable to reserve the likes of Task Force Myth solely for conventional battles.

⁸ Barry M. Blechman and Stephen S. Kaplan, *Force Without War: U.S. Armed Forces As A Political Instrument* (Washington, D.C.: The Brookings Institution, 1978), 16.

⁹ Congressional Research Service, *Report For Congress 96-119F: Instances of Use of U.S. Armed Forces Abroad, 1798-1995* (Washington, D.C.: Feb. 1996).

The “Small Change” of Soldiering?

In historical terms, this paper will regard the current debate as part of a long tradition of contrasting operations short of war—to which peace operations generally belong—with war itself. The epigraph to this chapter highlights military historian John Keegan’s distinction, in a famous book about British battles at Agincourt (1415), Waterloo (1815), and the Somme (1916), between “the sort of sporadic, small-scale fighting which is the small change of soldiering and the sort we characterize as a battle.” While examining various modern U.S. contingency operations, historian Lawrence Yates has found it useful to sort “nontraditional” or “unorthodox” military operations separately from “traditional warfare.”¹⁰

Among official writings, a U.S. Marine Corps manual in 1940 found it useful to categorize “small wars” separately from “wars.”¹¹ More recently, the U.S. Army experimented with “low-intensity conflict”¹² and, later, “operations other than war,”¹³ two short-lived variations on the small wars theme.¹⁴ Today, the Army seems prepared to

¹⁰ Lawrence A. Yates, “Military Stability and Support Operations: Analogies, Patterns, and Recurring Themes, *Military Review* (Oct. 1997): 51.

¹¹ U.S. Marine Corps, *Small Wars Manual* (Washington, D.C.: U.S. Government Printing Office, 1940). The same distinction is employed today by the *Small Wars and Insurgencies* journal, published by Frank Cass, London.

¹² U.S. Department of the Army, *Field Manual 100-20: Military Operations in Low Intensity Conflict* (Washington, D.C.: 5 Dec. 1990).

¹³ U.S. Department of the Army, *Field Manual 100-5: Operations* (Washington, D.C.: June 1993), 2-0.

¹⁴ Colonel David Fastabend, in “The Categorization of Conflict,” *Parameters* (Summer 1997): 75-87, describes the Army’s abandonment of both terms.

adopt “stability and support operations” as the counterpoise to traditional “offensive” and “defensive” operations.¹⁵ Although these distinctions cannot be conflated into a single distinction without wrecking their authors’ intentions, each nevertheless has served the time-honored function of placing the variety of less consuming military operations into contrast with war. In this paper, the point of the contrast will be to isolate whether and how the former should figure into preparation for the latter.

In the end, a host of specific recommendations will flow from this paper’s principal conclusion that peace operations are a valuable training ground for future wars. A change to the Army’s Unit Status Reporting (USR) system, an amendment of the federal statute that defines the Army’s mission, and a shift in the process by which peace operations are funded by Congress will be the most conspicuous of these recommendations. Much questioning of assumptions and analysis of available evidence must precede these and other recommendations, however. Thus, chapter 2 will outline the prevailing view that peace operations are distractions from combat readiness and will identify the problematic points of such a view for subsequent analysis. Chapter 3 will seek out underlying causes for the prevailing view and will identify corresponding shortcomings in readiness reporting, institutions, training, and thinking. Chapter 4 will propose broad ideas, based on the causes, to remedy the shortcomings. Chapter 5 will detail conclusions and specific recommendations and anticipate concerns as well as future research.

¹⁵ Ibid.

Throughout, this paper will challenge the notion that peace operations are merely “small change” in the currency of soldiering. Do wars really require of individual soldiers and units conduct so fundamentally different from that required in other operations? If so, are normal peacetime exercises really better suited to training such conduct than actual overseas deployments? Is war itself better suited? How much can Lieutenant Colonel Chris Myth count on the discipline, initiative, leadership, and decision-making his soldiers developed while enforcing the peace in Bosnia? In answering these and other questions, this paper will propose that human elements—though more difficult to measure than gunnery scores, personnel strength, and equipment wear and tear—are nevertheless the most reliable bases for war preparations.

CHAPTER 2

THE PREVAILING VIEW AND ITS PROBLEMS

Peace operations get little respect. Uniformed and civilian leaders, participating soldiers, and others sometimes acknowledge that peace operations can be pivotal to national security.¹⁶ Some of these people also credit peace operations with contributions to combat readiness.¹⁷ Still, the prevailing view, both among opinion leaders and in United States military ranks, is that peace operations are a distraction from the mission to fight “real” wars. At best, they are merely the “small change” of soldiering and thus of limited value to preparations for war. At worst, they can help create Task Force Smiths by degrading combat readiness. In between, peace operations may promote a variety of undesirable conditions, such as the displacement of authority from national to international bodies or the elevation of academic theories of military strategy over hard-won, practical lessons about the nature of war.

¹⁶ Since 1995, peacekeeping and peace enforcement have had prominent roles in the “peacetime engagement” and the “deterrence and conflict prevention” pillars of the National Military Strategy. Chairman of the Joint Chiefs of Staff, *National Military Strategy of the United States of America: A Strategy of Flexible and Selective Engagement* (Washington, D.C.: GPO, 1995), 4.

¹⁷ See, for example, Major David Nichting, Former Signal Officer in 22d Signal Brigade During Operation Joint Endeavor in Bosnia, January-December 1996 and Participant in a Rotation at the National Training Center in 1982, interview by author, 5 April 1998: “Peace enforcement in Bosnia was so beneficial to readiness because it was real world. There is no substitute for real-world deployments.” See also Lieutenant General John W. Hendrix, Commander of V Corps, testimony before the Subcommittee on Readiness, Senate Armed Services Committee, April 1998, quoted in “Congress Questions Army Readiness,” *Army*, April 1998, (summarizing Hendrix as testifying that the impact of the peace enforcement mission in Bosnia was “a mixed bag, both beneficial and detrimental”).

Viewing peace operations as a distraction is problematic in five ways.¹⁸ Such a view discounts the frequency with which peace operations must actually be conducted, suggests that they are executed in the absence of “friction,” ascribes a passive mindset to the soldiers who serve in them, conflates operations that are different in important ways, and invites confusion about the legitimacy of United States participation. The following discussion outlines these problematic points in turn.

Discounting the Frequency of Peace Operations

According to the prevailing view, Task Force Myth’s proper mission is to fight a conventional enemy force or deter aggression by remaining ready for war. Under this view, missions such as enforcing the peace in Bosnia should be the exception rather than the rule for use of military force. The use of such force should be a rare event, and when it is employed, it should overwhelm any opposing enemy or threat. General Colin Powell is a well-known proponent of the idea, contained in the prevailing view, that military force should be infrequently applied and—when applied—overwhelming:

Notwithstanding all the changes that have taken place in the world,
notwithstanding the new emphasis on peacekeeping, peace enforcement,

¹⁸ The purpose of this chapter is not to disparage those who hold the prevailing view. Individuals may cite sound reasons, grounded in pragmatism or principle, for holding some version of it. As we shall see in chapters 3 and 4, this is particularly true when concerns over peace operations center on training in difficult collective tasks or on the wearing down of equipment. Moreover, few actually hold a pure bias against peace operations. The view that peace operations are a distraction from the mission to fight wars may be held “on balance,” after weighing competing observations and conceptions of one’s duty. The purpose here is rather to outline a representative version of the prevailing view so as to expose its problematic points. Every view has problematic points, and an outline of a view—though otherwise limited in its usefulness—can help isolate these points for subsequent analysis.

peace engagement, preventive diplomacy, . . . [armed forces] have this mission: to fight and win the nation's wars. That's what we do.¹⁹

Elsewhere, General Powell states that United States armed forces can and will "do these other missions," and suggests that changes in doctrine, strategy, structure, equipment, training, and leadership techniques may be necessary.²⁰ But even then, he states, "we never want to [change] in such a way that we lose sight of the focus of why you have armed forces—to fight and win the nation's wars."²¹

As will be explained at greater length later in this chapter, the Constitution and statutory provisions amply justify United States participation in peace operations and other military operations short of war. These provisions permit a broader view of "why you have armed forces." Yet it is possible to reconcile the preference for infrequent and overwhelming force with the purpose of the armed forces—the Army in particular—under federal law. For instance, Title 10 of the United States Code states that the Army "shall be organized, trained, and equipped primarily for prompt and sustained combat incident to operations on land," and that it "shall be responsible for the preparation of

¹⁹ General Colin L. Powell, Remarks During News Conference on the Defense Department's Bottom-Up Review (made in Washington, D.C., on 1 Sept., 1993), quoted in Summers, "Powell Echoes Grant in Focusing Military," 78.

²⁰ Ibid.

²¹ Ibid. General Powell's restrictive view of the use of military force was a matter of public interest during Powell's confirmation hearings in the Senate on September 20, 1989. Senator Sam Nunn questioned Powell about his commitment to the six rules for use of military force laid down by Secretary of Defense Caspar Weinberger during a famous speech at the National Press Club on November 28, 1984. Powell had been Weinberger's military assistant at the time of the National Press Club speech and agreed with the rules. See, for example, Bob Woodward, *The Commanders* (New York: Pocket Star Books, 1991), 89-90 (quoting Weinberger's speech and Powell's Senate testimony).

land forces necessary for the effective prosecution of war except as otherwise assigned . . .”²² The words “primarily,” “combat,” and “war” make understandable the prevailing view’s concern with the high end of the conflict spectrum.²³

Traditional Warfare		Nontraditional Military Operations
<i>Total War</i>	<i>Limited War</i>	
American Revolution	War of 1812	Whiskey Rebellion
Civil War	Mexican War	Lewis and Clark Expedition
World War I	Spanish-American War	Reconstruction in South
World War II	Korean War	Pullman Strike
	Vietnam War	Nation Building in the Philippines, 1899-1904
	Gulf War	Nation Building in Cuba, 1899-1902, 1906-1909
		San Francisco Earthquake Relief
		Occupation of Haiti, 1915-34
		Occupation of Dominican Republic, 1916-24
		The Sandino Affair in Nicaragua, 1927-33
		Civilian Conservation Corps
		Greek Civil War, 1947-49
		Huk Insurrection in the Philippines, 1946-54
		Peace Operations in Lebanon, 1958
		Nation Building in Vietnam
		Stability Operations in Dominican Republic, 1965-66
		U.S. Civil Disturbances, 1960s
		Counterinsurgency in Latin America, 1960s
		Mayaguez Incident
		Peacekeeping in Beirut, 1982-84
		Peacekeeping in the Sinai
		Counterinsurgency in El Salvador
		Hurricane Andrew Relief
		Operations in Somalia
Nontraditional Military Operations		
<i>Expeditions/Contingency Operations</i>		
Undeclared Naval War with France		
Barbary Pirates		
Mormon War		
Indian Wars		
Boxer Rebellion		
Intervention in Cuba, 1906		
Intervention in Mexico, 1914, 1916		
Operation Blue Bat (Lebanon, 1958)		
Operation Power Pack (Dominican Republic, 1965)		
Operation Urgent Fury (Grenada, 1983)		
Operation Just Cause (Panama, 1989)		

Figure 1. Examples of Traditional and Nontraditional U.S. Military Operations.
Source: Lawrence A. Yates, “Military Stability and Support Operations: Analogies, Patterns, and Recurring Themes,” *Military Review* (Oct. 1997): 51, 52.

The problem is simply that wars are *not*, as General Powell states, “what we do” most of the time. As has already been mentioned, the vast majority of the more than 260 uses of military force since 1945 have been peace operations, noncombatant evacuations,

²² *U.S. Code*, Title 10, sec. 3062 (1988).

²³ Compare the Army’s statutory mission, which makes slight mention of noncombat duties “otherwise assigned,” to that of the Marine Corps, which states more affirmatively that the Corps “*shall perform* such other duties as the President may direct.” *U.S. Code*, Title 10, sec. 5063(a) (1988) (emphasis added).

counterterrorism actions, humanitarian assistance missions, shows of force, and other military operations short of war.²⁴ To view peace operations as a distraction from the mission of remaining combat ready is to discount the sheer volume and frequency of the military's workload outside of war as it is traditionally conceived.

In discounting the frequency and volume of that workload, the prevailing view also glosses over the considerable dollar cost. During fiscal year 1995, for instance, military operations other than war in Haiti, the former Yugoslavia, and Saudi Arabia, among other places, caused the services to report \$2.223 billion in "incremental" costs.²⁵ Incremental costs are those that are not budgeted and thus must be paid for out of other funds that the services receive (usually "Operations and Maintenance" funds) or out of

²⁴ This is the figure obtained by combining the data from Blechman and Kaplan, *Force Without War*, 16, with the most recent data from Congressional Research Service, *Instances of U.S. Armed Forces Abroad 1798-1995*. While the proposition that most uses of military force since 1945 have fallen short of war is surely true, it is important to note that the Blechman and Kaplan research employed a strict methodology that the Congressional Research Service report did not follow. To be counted within the area of interest of the Blechman and Kaplan study, the use of force had to have been a *political* use of the armed forces: "A political use of the armed forces occurs when physical actions are taken by one or more components of the uniformed military services as part of a deliberate attempt by the national authorities to influence, or to be prepared to influence, specific behavior of individuals in another nation without engaging in a continuing contest of violence." Blechman and Kaplan, *Force Without War*, 12. Thus Blechman and Kaplan excluded, for instance, the Korean and Vietnam War (between March 1965 and March 1972), regarding both as "continuing contests of violence." Ibid., 14.

²⁵ U.S. General Accounting Office, *Report Number NSAIID 96-121BR, Contingency Operations: Defense Cost and Funding Issues* (Washington, D.C.: GAO, March 15, 1996), 1. As of early 1996, the Department of Defense had reported over \$7 billion in incremental costs due to contingency operations for the preceding four years. U.S. General Accounting Office, *Report Number NSAIID 96-115, Contingency Operations: DOD's Reported Costs Contain Significant Inaccuracies* (Washington, D.C.: GAO, May 17, 1996), 1.

additional funds solicited from Congress after the operations are underway. A budgeting process that relies on a view that big wars are "what we do" will consistently underfund the many brushfires that inevitably demand a superpower response.²⁶ The hidden costs of failing to budget for peace operations may range from cuts on training funds for nonparticipating units to dangerous monetary constraints on participating units.²⁷

²⁶ See, for example, U.S. General Accounting Office, *Report Number NSAIID 96-120BR, Bosnia: Costs Are Uncertain But Seem Likely to Exceed DOD's Estimate* (Washington, D.C.: GAO, March 14, 1996), 1.

²⁷ See, for example, Kenneth H. Bacon, Assistant Secretary of Defense for Public Affairs, Background Briefing to the Press on the Fiscal Year 1998 Budget, at the Pentagon, February 5, 1997, reprinted in DefenseLINK News Home Page [news service on-line], available from <http://www.defenselink.mil/>; Internet; accessed 1 March 1998: "Even though the Bosnia operation, that which is not funded, is \$2 billion and it only represents less than one percent of our overall budget, it's two percent of our [Operations and Maintenance] budget, but by the time you look at just that little pie that's flexible that you can borrow against, it's eight percent if you start at the very beginning of the year. But if you wait until the third quarter or the fourth quarter to deal with it, if it's in the fourth quarter it's as much as a third of your OpTempo budget, so it has enormous impact on readiness if we don't get a supplemental passed, and we do have to get the supplemental passed. So we're going to have to be working very early on with the Congress to try to get a supplemental through as soon as possible. We really need it by the first part of April." The fiscal controls imposed by Congress upon the military trace their lineage to abuses that occurred in England in the century prior to the American Revolution. See generally Charles M. Clode, *The Military Forces of the Crown: Their Administration and Government* (London: John Murray, 1869), 110-131 (recounting the Crown's imposition of controls on expenditures, beginning from the Mutiny Act of 1688). Chapter 4 of this paper questions whether fiscal controls on procurement of new weapons systems are as effective as those imposed upon operations and maintenance funding for contingency operations. The latter must be sought after-the-fact and by exception. See 10 U.S.C. sec. 127a.

Suggesting That Peace Operations Are
"Friction-less"

War is characterized by friction. The military theorist Carl von Clausewitz, well known for this insight, explains why in war even the simplest things become difficult. Friction is a combination of factors—uncertainty, chance, fear, exhaustion, confusion, bad weather—that act so as to clog the gears of the “military machine,” to delay things, and to make them go wrong.²⁸ The prevailing view is that peace operations are generally free of friction and therefore not suitable to the task of preparing a Task Force Myth for the difficult combat environment.

Consider the following words of General Max Thurman, who articulated this aspect of the prevailing view in testimony before Congress, which was deliberating on the optimal structure for military forces:

The troops in the Sinai today, the battalion that is located there, are not conducting battalion-level activities. They are on stationery outposts where eight to twelve people are located and that is not a squad or platoon so they are not doing the kind of duty that you would want them to do if they were going to go to war . . . The bottom line, in my view, is that Americans have grown to know that they expect a decisive outcome if American forces are committed . . . because decisive outcomes produce lower casualties, and that calls for the overwhelming application of force, not a friction-less force that we seem to be building at this time.²⁹

²⁸ Carl Von Clausewitz, *On War*, ed. Anatol Rappaport and trans. Col. F. N. Maude (Middlesex, England: Penguin Books Ltd, 1982), 164-65: “The military machine, the Army and all belonging to it, is in fact simple, and appears on this account easy to manage. But let us reflect that no part of it is in one piece, that it is composed entirely of individuals, each of which keeps up its own friction in all directions.”

²⁹ General Maxwell R. Thurman (retired), former Commander of the U.S. Southern Command and Senior Fellow, Institute of Land Warfare, Association of the U.S. Army, Testimony Before the Military Forces and Personnel Subcommittee of the Committee on Armed Services, Hearing on *The Impact of Peacekeeping on Army Personnel Requirements*, 103d Cong., 1st sess., 27 Oct. 1993, 123-24.

General Thurman opposed the idea of building a force that can conduct peacekeeping in the Sinai but cannot apply overwhelming force toward a decisive outcome in war. By “friction-less force,” he appears to have meant one that is built for a friction-less *environment*—the operating environment supposedly faced in the Sinai and during other peace operations.³⁰

The notion that peace operations are generally devoid of friction also echoes in statements that dismiss nontraditional military operations as “bloodless strategy,” or “moves on a gigantic chessboard.”³¹ The derision flowed freely, for instance, in a recent article by John Lehman and Harvey Sicherman entitled “Demilitarizing the Military”:

Seizing the high ground, overcoming the enemy, and victory itself are replaced by neutrality, politically driven deployments, and rules of engagement written by lawyers and diplomats on the manicured turf of international negotiations. Peace-keeping “demilitarizes the military,” creating forces more schooled in police and diplomatic work than in winning wars.³²

Here, the reader is invited to conjure up an image of operations that are played out on “manicured turf,” molding forces that cannot win wars. Lehman and Sicherman attempt to seize the rhetorical high ground by identifying peace-keeping with “police and

³⁰ Thurman’s preference for decisive outcomes and overwhelming application of force are well-documented with respect to his criticisms of the original *Blue Spoon* plan for the projection of United States military force in Panama in 1989. See, for example, Thomas Donnelly, Margaret Roth, and Caleb Baker, *Operation Just Cause: The Storming of Panama* (New York: Lexington Books, 1991), 56.

³¹ Summers, “Powell Echoes Grant in Focusing Military,” 78.

³² John F. Lehman, Jr., and Harvey Sicherman, “Demilitarizing the Military,” *Foreign Policy Research Institute WIRE: A Catalyst for Ideas* 5, no. 8 (1997): 1-2.

diplomatic work.” The authors depict peace operations as unopposed by a determined enemy and by friction and thus color them something less than “military.”

Yet the notion that peace operations are friction-less ignores the simple truth that they are beset with uncertainty, chance, fear, exhaustion, confusion, bad weather, etc., and that things can and frequently do go wrong. Soldiers driving over unrecorded foreign landmines in the Sinai,³³ subduing hostile bandits hidden behind human shields in Mogadishu,³⁴ and confronting provocative armed Serbs in Macedonia³⁵ know well the look, the smell, and the feel of friction. So do commanders attempting to restore order in Haitian streets controlled by gunmen loyal to the Cedras regime³⁶ or seeking to enter Bosnia across a Sava River that has been swollen by winter storms.³⁷ While peace operations will often lack the clear definition of progress toward success that marks

³³ Major Jeffery A. Ballmer, Former Executive Officer, C Company, 3-47th Infantry, 9th Infantry Division and Former Company Commander, B Company, 2-22d Infantry, 10th Mountain Division and Participant, in 1988 and 1992, in Multinational Force Observer Missions in the Sinai, interview by author, 29 September 1997.

³⁴ See, for example, John Lancaster, “Mission Incomplete, Rangers Pack Up; Missteps, Heavy Casualties Marked Futile Hunt in Mogadishu,” *Washington Post*, 21 October 1993, p. A1.

³⁵ David Bolgiano, “Firearms Training,” *Army Lawyer*, October 1995, 79.

³⁶ United States Army Training And Doctrine Command, Center For Army Lessons Learned (CALL), *Operation Uphold Democracy, Initial Impressions: Haiti D-20 To D+40* (Fort Leavenworth: December 1994), 145-47.

³⁷ United States Army Training And Doctrine Command, Center For Army Lessons Learned (CALL), *Operation Joint Endeavor, Initial Impressions Report, Bosnia-Herzegovina: Task Force Eagle Initial Operations* (Fort Leavenworth: May 1996), 3 (describing the difficulties of “simultaneous deployment/employment”).

decisive wars, it is inaccurate to suggest that they are conducted in a rarefied atmosphere, devoid of real-world friction.³⁸

Ascribing a Passive Mindset to Soldiers

Under the prevailing view, soldiers fighting in real wars must maintain a mindset totally at odds with the requirements of peace operations. The prevailing view holds that in order to repel the PLA's advance into Chagang-do, the soldiers in Task Force Myth must concentrate upon fury, death, and destruction—states of mind that conflict with the sober calculations necessary to help keep peace in Bosnia or anywhere else. “Simple, ruthless, and direct” describes the appropriate mindset for war, according to the author of “Peace Missions Dull the Army’s Combat Edge,” an opinion column that appeared in the *Army Times*:

In contrast, a peace operation is normally a dispassionate effort to stop or prevent battle and bloodshed. It is not a crusade. Victory and defeat are irrelevant, and success is never certain. The goal offers less clarity and more shades of gray. Being simple, direct, and ruthless contributes little to this aim or method and can even lead to failure. . . . Initiative does not thrive in such undertakings. Caution and compromise do. This nuanced “peace focus” is diametrically opposed to the traditional creed of the American warrior. . . . [T]he combat focus of the successful war fighter is fundamentally incompatible with most peace operations. And a peace focus is worthless on the battlefield.³⁹

³⁸ It is also inaccurate to suggest, as Lehman and Sicherman do, that rules of engagement are written by civilian lawyers and diplomats. See, for example, Yates, *Military Stability and Support Operations*, 59: “An interesting point regarding ROE in both the Dominican intervention and Panama was that these constraints were not imposed by political authorities on reluctant military commanders. Rather, the rules in each case were promulgated by military commanders who, while certainly following political guidance, truly believed the constraints were necessary and appropriate for mission accomplishment. That troops in the field held a different view was a challenge for small-unit leaders and for field officers performing liaison duties in higher headquarters.”

³⁹ Lieutenant Colonel James A. Baker, “Peace Missions Dull the Army’s Combat Edge,” *Army Times* (6 Dec. 1993): 37. Concern over loss of the “warrior ethic”

Noteworthy in this contrast between the “peace focus” and the “combat focus” is the implied assertion that the former breeds “caution and compromise,” whereas the latter breeds “initiative.” Far from leaning forward in their foxholes (or in their Bradley Fighting Vehicles), the soldiers of Task Force Myth—or any soldiers who have recently served in a peace operation—are passive souls, content to let the environment shape their response, rather than proactive shapers of their environment.⁴⁰

Ascribing a passive mindset to soldiers who deploy to peace operations is problematic in at least four ways. First, it contradicts the Army’s own insistence that the same soldiers and units can excel in both war and operations other than war.⁴¹ Second, it

frequently appears in conjunction with other arguments challenging participation in peace operations. See, for example, Richard J. Newman, “Can Peacekeepers Make War?,” *U.S. News and World Report*, 19 Jan. 1998, 39: “Throughout America’s armed forces, there is mounting evidence that conventional combat skills—and the warrior ethic that goes with them—are being eroded by a combination of downsizing, budget cuts, and widespread commitments to noncombat operations in Bosnia, the Middle East, and elsewhere.”

⁴⁰ See Donald Kagan, “Panel #1: Missions,” in Foreign Policy Research Institute, *The Demilitarization of the Military: Report of a Defense Task Force* (Philadelphia: FPRI, March 1997), 13, 19: “Opponents of secondary missions also fear another source of degradation. They point to the danger that a focus on these lesser activities could undermine the army’s war-fighting capacity in more subtle, yet fundamental ways. The skills and qualities needed for peacekeeping are not the same as those required for war fighting. The toughness, aggressiveness, and ferocity that are essential for the latter are the opposite of the tact, patience, and caution often needed for the former. The fear is that the training needed to produce effective peacekeepers would degrade the trainees’ capacity for war fighting. Some believe that the kind of soldier who excels in one assignment, regardless of training, is less well suited to the other.” See also David Hackworth, *Hazardous Duty* (New York: William Morrow and Company, 1996), 283: “We have got our warrior built up to fight wars, but he is doing missions where he has to pull his punch—and this pulls all his muscles.”

⁴¹ *Field Manual 100-5*, 13-8: “The leadership, organization, equipment, discipline, and skills gained in training for war are also of use to the government in operations other than war.”

contradicts research that suggests peace operations demand soldiers who not only demonstrate appropriate restraint, but who also display timely initiative and a willingness to take risks.⁴² Third, it contradicts historical experience that confirms armies can be victorious in combat while attempting to shield from “ruthless” conduct the civilians and noncombatants who inevitably populate modern battlefields.⁴³ Fourth, it trivializes the role of leadership and individual decision-making in military units by depicting soldiers in war as automatons who are programmed to fire indiscriminately.⁴⁴

Lieutenant Colonel Chris Myth is wise to question whether his soldiers will have sufficient aggressiveness after months of mostly nonviolent operations in Bosnia. It is plausible that violent combat actions against the PLA will require a spirit of the attack, a boldness, and even a mindset, that are distinct in some respects from those suited to de-escalating tense standoffs between rival factions. Yet the prevailing view mostly ignores

⁴² See, for example, Major David M. Last, Canadian Armed Forces, “Theory, Doctrine, and Practice of Conflict De-Escalation in Peacekeeping Operations,” (Fort Leavenworth: Master of Military Arts and Sciences diss., June 1995), 148; Joan Harman, “Peacekeeping in Somalia,” Research Report 1663 (U.S. Army Research Institute, July 1994), 2-3; Brigadier General Michael Harbottle, British Army, *The Impartial Soldier* (London: Oxford University Press, 1970), 7: “There is no doubt in my mind that the success of a peacekeeping operation depends more on anything else on the vigilance and mental alertness of the most junior soldier and his non-commissioned leader, for it is on their reaction and immediate response that the success of the operations rests.” See also Colonel Gregory Fontenot, Former Brigade Commander in Bosnia from December 1995 to December 1996, interview by author, 6 August 1997 (describing the importance of soldier initiative).

⁴³ See, for example, William J. Slim, *Defeat Into Victory* (London: Macmillan Publishers Limited, 1956), 513-15.

⁴⁴ See, for example, Daniel P. Bolger, *The Battle For Hunger Hill: The 1st Battalion, 327th Infantry Regiment at the Joint Readiness Training Center* (Novato, CA: Presidio, 1996), 94-100.

the question of how individual soldiers can develop the mental agility needed to make the switch between mindsets: one for combat against a clearly identified enemy and one for more restrained and calibrated actions when confronted with ambiguous circumstances. More important, by asserting that there is no overlap between the “peace focus” and the “combat focus,” the prevailing view dodges the challenge of promoting those attributes—such as discipline, good decision-making, initiative, physical and mental toughness—that surely must have utility across the entire spectrum of military operations.

Conflating Operations That Have Important Differences

Under the prevailing view, the “spectrum” of military operations really is not a spectrum at all. That is, the prevailing view draws a sharp distinction between peace operations and war. The drawing of sharp distinctions between two grand categories, though sometimes useful for making a point, also has the disadvantage of yoking together things that may have important differences. A representative example of this sort of sharp categorization recently appeared in one of the Army’s professional journals:

Soldiers conducting peacekeeping operations who merely observe and stand in the line of fire do not effectively demonstrate American resolve; they merely provide convenient targets . . . An additional danger in conducting [operations other than war (OOTW)] . . . is the degradation of combat skills. Units deploy for six-month periods, often without their organic equipment, and conduct operations not included in their [mission essential task lists (METLs)]. During this period, soldiers learn new skills and conduct time- and resource-intensive missions at the cost of METL training.⁴⁵

⁴⁵ Captain Sean A. Kushner, “Opinion: OOTW—The Winning Role of the U.S. Army,” *ADA Bulletin* (Mar.-Apr. 1996): 43, 45.

In this passage, a particular operation other than war (peacekeeping) is first reduced to “observ[ing] and stand[ing] in the line of fire” and then equated with the entire range of operations other than war. The implication is that Lieutenant Colonel Myth’s unit, irrespective of the specific mission conducted in Bosnia before deploying to North Korea, will have inevitably suffered the same “degradation of combat skills” supposedly inflicted upon peacekeeping units in the Sinai.

Conflating operations other than war in this way oversimplifies and misleads. Even assuming that nothing about combat resembles the tasks required to observe and report violations of the agreement between Egypt and Israel—a dubious assumption in itself—why should this be true with respect to all other peace operations? Consider, for instance, the events of October 4, 1993, when what began as a security mission in Somalia, sponsored by the United Nations, escalated into a fierce engagement between United States forces and those of a Somali warlord.⁴⁶ The Somalis shot down two United States helicopters with shoulder-fired rockets, and both sides fired thousands of rounds before Americans at the crash site could be evacuated.⁴⁷ The bloody engagement claimed the lives of twelve United States soldiers and hundreds of Somalis.⁴⁸ Surely, operations

⁴⁶ See Rick Atkinson, “Night of a Thousand Casualties: Battle Triggered the United States Decision to Withdraw From Somalia,” *Washington Post*, 31 January 1994, p. A1. See also Mark Bowden, *Blackhawk Down: An American War Story* (Philadelphia: Philadelphia Inquirer, 1998), [a 29-chapter book on-line, including video and audio clips of interviews with participants in the October engagement, photos, and documents]; available from <http://www3.phillynews.com/packages/somalia/sitemap.asp>; Internet; accessed 26 April 1998.

⁴⁷ Ibid.

⁴⁸ Ibid.

in these hostile conditions were similar in many respects to traditional combat operations, despite the Somalia mission's technical status within Army jargon as a mere "peace operation."⁴⁹

Or consider the tense prelude to military operations in Haiti on September 18, 1994, when the paratroopers of the 82d Airborne Division departed in aircraft from Pope Air Force Base, North Carolina, convinced that they would soon be parachuting into hostilities.⁵⁰ Three days earlier, the President had stated that the United States would forcibly oust the Cedras regime from power, if necessary. In one last attempt to persuade the junta to step down without massive bloodshed, the President had dispatched former President Jimmy Carter, General Colin Powell, and Senator Sam Nunn to Haiti. That this team succeeded in persuading the junta to cooperate in the deployment of United States military forces does not alter the fact that as the paratroopers took off from North Carolina and headed toward the Caribbean, they had planned, rehearsed, and expected to execute a combat assault. The nonviolent insertion of marines and 10th Mountain

⁴⁹ See, for example, Major General S.L. Arnold & Major David T. Stahl, "A Power Projection Army in Operations Other Than War," *Parameters*, Winter 1993-94, 4-26. Within the definitions provided in note 1 above, Operation Restore Hope was clearly "peace enforcement," consisting as it did of the "application of military force, or the threat of its use, . . . pursuant to international authorization, to compel compliance with resolutions or sanctions designed to maintain or restore peace and order."

⁵⁰ The background information contained in this paragraph is based upon Center for Law and Military Operations, *Law and Military Operations in Haiti, 1994-1995: Lessons Learned for Judge Advocates* (Charlottesville: The Judge Advocate General's School, U.S. Army, 1995), 11-22. A history of Uphold Democracy based on exhaustive interviews with participants in the Haiti operations will soon be completed by Lieutenant Colonel Walter Kretchik and Robert Baumann, and published by Combat Studies Institute, Fort Leavenworth, Kansas.

Division soldiers on 19 September began a peace operation that had required combat preparations of the most realistic sort.

Or consider the complex command, control, communications, and logistics challenges faced in Bosnia during December of 1995 and the early months of 1996.⁵¹ During this early period of the peace operation in which our own imagined Task Force Myth would eventually serve, two United States armored brigades spearheaded a multinational effort to establish a zone of separation (ZOS) between heavily armed former warring factions. Each brigade assumed responsibility for enforcing the terms of an agreement between the factions over a very large area of operations. Even as United States forces were still making their way into Bosnia over long routes that stretched back to central Germany, mechanized and armored teams moved quickly to key spots in the countryside to aid the disengagement of factional elements and secure freedom of movement. They helped coordinate a massive de-mining effort, patrolled hundreds of miles of roads, began the disarmament of the ZOS, and faced down dozens of armed, would-be bullies. Because of the prevalence of armed and potentially hostile elements, plans and unit rehearsals throughout this peace operation always included sequels

⁵¹ The background information in this paragraph is based on Center For Army Lessons Learned (CALL), *Operation Joint Endeavor, Initial Impressions Report 1* as well as Center for Army Lessons Learned, *Newsletter No. 96-5, Drawing a Line in the Mud: Establishing and Controlling a Zone of Separation (ZOS)* (Fort Leavenworth: CALL, May 1996), Center for Army Lessons Learned, *Newsletter No. 97-12, Tactics, Techniques, and Procedures for Sustainment Training While Employing: Lessons Learned from Operation Joint Endeavor* (Fort Leavenworth: CALL, June 1997) and Major Fred Johnson, Former Member of Combined Arms Assessment Team Serving With Multinational Division North, Bosnia-Herzegovina in January 1996, interview by author, 7 November 1997.

addressing combat engagements. Because Nordic, Polish, Russian, and other nations would eventually send forces to assist, the liaison with adjacent military forces in the area grew complex and sophisticated. Can it be accurate to identify this sort of operation with a routine six-month rotation by light infantry forces as observers in the Sinai?

This is precisely what the prevailing view does. It places war and combat in a higher, exclusive sphere—one that is explosive, climactic, and a bit mysterious.⁵² Every other form of military operation flows together into a lesser sphere that is governed by more pedestrian and discernible rules. The two spheres do not touch. The sharp categorization employed by the prevailing view is nothing new. A few military historians have noted the traditional reluctance of their colleagues to puncture the higher sphere and ask hard questions about the true nature of warfare and combat.⁵³

Yet the conceptual segregation of war and combat from all other types of military operations not only hampers historical analysis of the former category; it greatly complicates the challenge of drawing useful lessons about readiness from the various types of operations in the latter category. A lack of differentiation is to blame. Recent refinements in Army and joint doctrine have resulted in distinctions not only between

⁵² See, for example, Roger J. Spiller, "The Tenth Imperative," *Military Review* 69, no. 4 (April 1989): 2, 10: "Warfare, and especially combat itself, belonged to the mysterious side of life; any knowledge of these events was exclusively the business of soldiers and was wholly segregated from life outside, as remote as a regimental depot."

⁵³ Ibid.: "All along, and perhaps even today in some quarters, the posing of intimate questions about the act of combat was considered in the military trades somehow impertinent, as if the nobility of military deeds was beyond the realm of inquiry." See also Keegan, *Face of Battle*, 35-45.

“peacekeeping” and “peace enforcement” operations, but also between these two types of “peace operations,” and “counterdrug operations,” “combating terrorism,” “noncombatant evacuation,” “humanitarian assistance and disaster relief,” “security assistance,” “support to domestic civil authorities,” “shows of force,” and “support for insurgencies and counterinsurgencies.”⁵⁴ Army and joint doctrine also now distinguish between conventional wartime operations and “contingencies,” which they define as “emergenc[ies] involving military forces caused by natural disasters, terrorists, subversives, or by required military operations.”⁵⁵ Because of “the uncertainty of the situation, contingencies require plans, rapid response and special procedures to ensure the safety and readiness of personnel, installations, and equipment.”⁵⁶ Still, these diverse operations remain—at least for the moment—locked together in the doctrinal sphere known as “military operations other than war.” Specific tactics, techniques, and procedures for these operations have been slow to find an ardent training audience within the Army.⁵⁷ Moreover, the paltry influence of these still-emerging military doctrinal concepts on views held by the wider public ensures the continued dominance of the prevailing view outside military ranks.

⁵⁴ *Field Manual 100-5*, 13-5 to 13-8.

⁵⁵ Department of Defense, *Joint Publication 1-02: Dictionary of Military and Associated Terms*, 86.

⁵⁶ *Ibid.*

⁵⁷ See, for example, Yates, “Military Stability and Support Operations,” 51.

Inviting Confusion About the Legitimacy
of Peace Operations

How the wider public views peace operations is no easy thing to establish conclusively. Enough ambivalence has existed in public opinion for the President to deploy United States soldiers again and again as peacekeepers and peace enforcers without suffering fatal political damage. Still, Congress' persistent refusal to pay national assessments to the United Nations provides some indication that operations under the aegis of that international body are unpopular.⁵⁸ Similar indications can be found in the forces of public opinion that drove President Clinton to end operations in Somalia,⁵⁹ to sign a decision directive carefully circumscribing United States participation in peace operations,⁶⁰ to pull the bulk of United States troops out of Haiti on a strict timetable,⁶¹ and initially to promise an early exit from Bosnia.⁶² Also, the

⁵⁸ See, for example, Judy Keen, "U.S. Warns U.N. On Dues Cut: Lower Payment Or Risk 'Damage' To Relationship," *USA Today*, 21 October 1997, p. 6.

⁵⁹ See, for example, Susan Page, "Rangers Pulled Out; Clinton Orders Somalia Exit," *Newsday*, 20 October 1993, p. A1.

⁶⁰ This is the classified document known as "Presidential Decision Directive 25" or "PDD-25." An unclassified summary of PDD-25 appears in U. S. Department of State, Bureau of International Organization Affairs, *Publication No. 10161: The Clinton Administration's Policy on Reforming Multilateral Peace Operations* (Washington, D.C.: DOS, 1994).

⁶¹ On 4 October 1994, close to 21,000 United States soldiers and marines were in Haiti. By 31 March 1995, the number had dropped to about 2,400. Center for Law and Military Operations, *Law and Military Operations in Haiti*, 18, 22.

⁶² Remarks by President Clinton at the Signing of the Presidential Proclamation Of Human Rights Day (Dec. 10) And Human Rights Week (Dec. 10-16), Washington, Dec. 5, 1995, reprinted in *Defense Issues* 10, no. 3 (1995): 1.

public's preference for restricting use of military forces to traditional wars has figured in the dispute between Congress and successive presidents over the latter's war powers.⁶³

Although two recent studies reveal that the isolationism of middle America may be overestimated by policy-makers,⁶⁴ even these studies reflect strong popular feeling that the United States should not serve as "world policeman."⁶⁵ Big wars that clearly threaten United States interests provide the surest basis for public support of a decision to send troops overseas. The lack of an immediate threat to the United States in Korea caused many Americans to think, by December of 1950, that forces following Task Force Smith to the peninsula no longer had business there.⁶⁶ The lack of an immediate threat to the United States in Bosnia could well place many Americans in disfavor of Task Force Myth's deployment there in the year 2000.

The view that peace operations are a distraction from the mission to fight wars is only a short, if distinct, step from the view that traditional wars are the only legitimate overseas uses of military force. One of the more celebrated recent voices for this extreme view is former Army Specialist Michael New, a medic who was convicted by court-

⁶³ The modern era of this age-old dispute began with the War Powers Resolution of 1973. See 87 Stat. 555, Public Law 93-148, 93d Cong. (H.J. Res. 542, adopted over presidential veto on 7 November 1973).

⁶⁴ Steven Kull, I.M. Destler, and Clay Ramsay, *The Foreign Policy Gap: How Policymakers Misread the Public* (College Park, MD: The Center for International and Security Studies, Oct. 1997); Eric V. Larson, *Casualties and Consensus: The Historical Role of Casualties in Domestic Support for U.S. Military Operations* (Santa Monica, CA: RAND, 1996).

⁶⁵ Kull, *The Foreign Policy Gap*, 128.

⁶⁶ Larson, *Casualties and Consensus*, 20 (fig. 2-4).

martial for failing to obey an order to don the United Nations blue beret and patch.⁶⁷

New claimed that the order was unlawful because his allegiance did not extend to the United Nations. On July 28, 1996, New spoke in Conroe, Texas, to a hometown crowd that greeted him as a hero following his bad conduct discharge from the Army:

Some of you may be veterans of the Korean War. Korea was the first limited UN war in which victory was not the primary objective. Orders began coming from New York instead of Washington, and General MacArthur, who said, "In war there is no substitute for victory," had to be relieved of command. That kind of winning attitude had to be eliminated. Then came Vietnam. It badly marked a generation. Men, deceived by their political leaders, fought half a world away when the real battle was being fought here for the heart and soul of America. It seemed, as I learned more about how the UN military wages "peace" in places like Korea, Vietnam, and Somalia, that Macedonia and Bosnia seemed like more of the same limited "no-win" UN wars."⁶⁸

Today, the "Official Michael New Homepage" on the Internet features a large color photograph of New in uniform with full decorations, a menu of articles and legal documents justifying New's disobedience, and a slick digital recording that automatically greets browsers with renditions of "America the Beautiful," "Mine Eyes Have Seen the

⁶⁷ See *United States v. Specialist Michael New* (3d Infantry Div. 1995). See also *United States ex rel. Michael G. New v. Perry*, 919 F. Supp. 491 (D.D.C. 1996) (denying New's habeas petition following conviction) and *New v. Cohen*, 129 F. 3d 639 (D.C. Cir. 1997) (affirming the district court's decision). Secondary sources commenting upon the litigation include "G.I. Is Charged After Refusing U.N. Duty," *New York Times*, Oct. 19, 1995, p. A12, Robert S. Winner, "SPC Michael New v. William Perry, Secretary of Defense: The Constitutionality of U.S. Forces Serving Under U.N. Command," *Depaul Digest of International Law* 3 (1997):30, and Major Michael Newton, "Appeals Court Denies Michael New's Petition for Habeas Corpus," *The Army Lawyer*, March 1998, 27-30.

⁶⁸ Michael G. New, Speech during homecoming rally at the Montgomery County Courthouse, Conroe, Texas, on July 28, 1996. Transcript of remarks are available in database online at <http://www.techmgmt.com/restore/new1.htm>; accessed 2 November 1997.

Glory,” and the “Ballad of Michael New.”⁶⁹ Other, “unofficial” homepages maintained by web users in political sympathy with New feature hyperlinks to supportive articles and solicit contributions for News’ legal defense, which continues on appeal.⁷⁰

New has not lacked support within the ranks of lawmakers. His conviction resulted in renewed support for a House of Representatives Bill seeking withdrawal of the United States from the United Nations.⁷¹ It also spurred supporters in the House to draft a bill that would prohibit United States soldiers from wearing United Nations insignia.⁷² Congressmen James Traficant (Ohio) and Roscoe Bartlett (Maryland) co-authored a 1996 resolution condemning New’s court-martial,⁷³ and in 1997, Congresswoman Helen Chenoweth (Maryland) authored a resolution condemning the deployment of United States military personnel in the service of the United Nations in Macedonia.⁷⁴ In Oklahoma, New’s supporters dredged up copies of a resolution passed in that state’s legislature in 1994, which called upon the United States to “[c]ease engagement in any

⁶⁹ See <http://www11.geocities.com/CapitolHill/8817/index.html>; accessed 2 November 1997.

⁷⁰ See <http://www.infinet.com/~jaylor/mikenew.html>; accessed 2 November 1997.

⁷¹ U.S. Congress, House, *A Bill to Withdraw the United States from the United Nations*, 104th Cong., 1st sess., 1995, H.R. 2535.

⁷² U.S. Congress, House, *A Bill to Prohibit the Armed Services From Adorning United Nations Indicia or Insignia*, 104th 1st sess., 1995, H.R. 2540.

⁷³ U.S. Congress, House, *A Resolution Condemning the Court-Martial of Specialist Michael New*, 104th Cong. 2d sess., 1996, H.C.R. 134.

⁷⁴ U.S. Congress, House, *A Resolution Condemning the Deployment of United States Military Personnel in the Service of the United Nations in the Former Yugoslav Republic of Macedonia*, 105th Cong., 1st sess., 1997.

military activity under authority of the United Nations or any world body.”⁷⁵

Throughout, lawmakers have followed New’s attorneys in citing the United Nations Participation Act, the Constitution, and even New’s oath of enlistment as authority for his disobedience.

The arguments on New’s behalf are specious in legal and constitutional terms. Under U.S. law, an order requiring the performance of a military duty or act—such as the donning of a uniform—is inferred to be lawful and is disobeyed at the peril of the subordinate.⁷⁶ A person’s conscience, religion, philosophy, or personal interpretation of where his loyalties should lie cannot justify or excuse the disobedience of an otherwise lawful order.⁷⁷ As long as the order is understandable, the form of the order is immaterial, as is the method by which it is transmitted.⁷⁸ New believed that his own interpretation of the enlistment oath and his own determination of appropriate national security policy superseded specific orders from his immediate superiors. It is true that an order is not lawfully binding if it is in conflict with the lawful order of a superior authority⁷⁹ or if contrary to the Constitution or laws of the United States. However, before any other suggested source of guidance—here article I of the Constitution,⁸⁰

⁷⁵ State of Oklahoma, House of Representatives, Oklahoma Resolution #1047 (adopted 28 March 1994).

⁷⁶ *Manual for Courts-Martial*, United States 1984 [hereafter MCM], Part IV, para. 14c.(2)(a)(i).

⁷⁷ MCM Part IV, 14c.(2)(a)(iii).

⁷⁸ MCM Part IV, para. 14c.(2)(a)(iv)(c)

⁷⁹ See generally *United States v. Green*, 22 M.J. 711 (A.C.M.R. 1986).

⁸⁰ U.S. Constitution, art. I, sec. 8 (consisting of 18 clauses that give Congress

section 7 of the United Nations Participation Act,⁸¹ or New's enlistment oath—can legally supersede an order from an immediate superior, it must first meet certain criteria of enforceability with respect to individual servicemembers.⁸² The alternative sources of guidance cited by New and his defenders meet none of these.⁸³

As a Constitutional matter, the President has independent authority, as Commander-in-Chief of the Armed Forces and as Chief Executive with responsibility for the conduct of foreign affairs, to deploy forces in United Nations peace operations.⁸⁴ This authority springs from Article II of the Constitution, into which the drafters

broad powers, including the power to "declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water" and the power to "raise and support Armies").

⁸¹ United Nations Participation Act of 1945, § 7, Pub. L. No. 79-264, 59 Stat. 619 (amended by legislation and codified at 22 U.S.C. § 287d-1 (1988 & Supp)) [hereinafter UNPA] (comprising one of the nine sections of the Act that are codified at 22 U.S.C. §§ 287 to 287e-1).

⁸² These criteria of enforceability stem from Articles 90 and Article 92 of the Uniform Code of Military Justice, which are codified at U.S. Code, Title 10, secs. 890 and 892. To be considered a conflicting order under Article 90, the guidance must be a specific mandate by a superior officer to do, or not to do, a specific act. *See* MCM Part IV, para. 14 (c)(2)(iv)(d)). *See also* MCM Part IV, para. 16c (1)(e) ("Regulations which supply only general guidelines or advice for conducting military functions may not be enforceable under Article 92(1)."); MCM App. 21, para. 16, pg. A21-92 ("The general order or regulation violated must, when examined as a whole, demonstrate that it is intended to regulate the conduct of individual servicemembers, and the direct application of sanctions for violations of the regulation must be self-evident." (citing *United States v. Nardell*, 21 U.S.C.M.A. 327, at 329; 45 CMR 101, at 103 (1972))).

⁸³ *See also* *Orloff v. Willoughby*, 345 U.S. 83, 92 (1953) (opining that the military is an organization in which the essence of the service "is the subordination of the desires and interests of the individual.").

⁸⁴ Conrad K. Harper, U.S. Department of State Legal Advisor, "Legal Authority for U.N. Peace Operations," (March 4, 1994), 7 (manuscript in possession of the author).

incorporated those national security and foreign affairs powers that were ill suited for legislative bodies.⁸⁵ While constitutional authority tends to increase when two or more branches of government act in concert,⁸⁶ it is incorrect to assert—as New’s lawyers asserted—that the President’s independent powers are trumped by the will of Congress as reflected in the United Nation’s Participation Act. Our system of government contemplates that the President will have the freedom to throw United States support behind diplomatic and military tools that help prevent and resolve conflicts before they pose direct threats to the nation. He also has the power to support initiatives that serve United States interests by promoting democracy, regional security, and economic growth. For Congress to deny him the prerogative of deploying peacekeepers in support of these goals would be to arrogate to the legislative branch powers reserved for the executive branch.⁸⁷

Yet as ill-founded as Michael New’s legal and constitutional arguments are, the popularity of New’s cause demonstrates how the prevailing view of peace operations can invite public misunderstanding about the legitimacy of such operations. Again, the view

⁸⁵ See, e.g., U.S. Constitution, art. II, sec. 1 (“The executive Power shall be vested in a President of the United States.”), sec. 2, cl. 1 (“The President shall be Commander in Chief of the Army and Navy of the United States . . .”), sec. 2, cl. 2 (“He shall have the Power, by and with the Advice and Consent of the Senate to make Treaties, . . .”).

⁸⁶ See, for example, Laurence H. Tribe, *American Constitutional Law* (Mineola, New York: Foundation Press, 1988), 231-32.

⁸⁷ The literature in this area of constitutional law is massive. See generally Louis Henkin, *Foreign Affairs and the Constitution*, 2d ed. (Oxford: Clarendon Press, 1996); Abraham Sofaer, *War, Foreign Affairs, and Constitutional Power* (Cambridge, MA: Ballinger, 1976).

that peace operations distract the military from its "real" mission is only a short step from New's view that peace operations are illegal.

Still, the step exists, however short, and many who hold the prevailing view of peace operations clearly oppose New's view.⁸⁸ Perhaps the more serious potential misunderstanding engendered by the prevailing view is not that of the general public over the legitimacy of peace operations, but rather that of civilian leaders over military resistance to peace operations. United States military officers—sworn to uphold and defend the Constitution—acknowledge the legitimacy of all operations duly directed by civilian governmental leaders, but an Army general's pure motives for resisting a particular overseas deployment may get lost in the noise surrounding the prevailing view. The risk is that political leaders in the United States government will misunderstand the military's resistance and conclude that civilian control over the military is at risk.⁸⁹

⁸⁸ See, for example, Baker, "Peace Missions Dull the Army's Combat Edge," 37: "Peace operations are a military task, legitimately assigned to the U.S. armed forces."

⁸⁹ See generally Colonel Charles J. Dunlap, "Welcome to the Junta: The Erosion of Civilian Control of the U.S. Military," 29 *Wake Forest Law Review* 341-92 (1994); Eliot A. Cohen, "Panel #3: The Civil-Military Balance," in Foreign Policy Research Institute, *The Demilitarization of the Military: Report of a Defense Task Force* (Philadelphia: March 1997), 31-38; Richard H. Kohn, "Out of Control: The Crisis in Civil-Military Relations," *The National Interest* (Washington: Spring 1993): 3-17; Thomas E. Ricks, "Politics and Policy: Military is Becoming More Conservative, Study Says," *The Wall Street Journal*, 11 Nov. 1997, A20; Richard H. Kohn, *Eagle and Sword: The Beginnings of the Military Establishment in America* (New York: The Free Press, 1975); William J. Gregor, "Toward a Revolution in Civil-Military Affairs: Understanding the United States Military in the Post Cold War World," (unpublished manuscript on file with the author, 1998); Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, MA: The Belknap Press of Harvard University, 1985); Morris Janowitz, *The Professional Soldier: A Social and Political Portrait* (New York: The Free Press, 1960); Russell F. Weigley, "The American Military and the Principle of Civilian Control from McClellan to Powell," *The Journal of Military*

Presidents seek a range of diplomatic and military options when facing crises.⁹⁰

While senior uniformed leaders must always counsel against the foolhardy employment of military force, their arguments against a proposed deployment must articulate principles—such as force protection, lack of clarity in goals, inadequate training and equipment, or risk of dangerous escalation—and must cite compelling, specific data. The prevailing view, based as it is upon a broad concept that the Army's "proper" mission is combat, invites skepticism that our elected and appointed civilian leaders are actually in control of the armed forces.⁹¹

History 57 (October 1993): 28. One of the more direct and colorful recent exchanges on the issue of whether civilian control really is at risk appeared in Lieutenant Colonel Ralph Peters, review of *Making the Corps*, by Thomas E. Ricks, *Parameters* (Winter 1997-98): 175-83: "My second reservation is more serious, and extremely troubling to me. In the book's only ill-judged chapter (which was recently excerpted in *The Atlantic Monthly*), Ricks takes on a big issue and gets it flat-out wrong. He describes a wildly exaggerated rift between America's military and contemporary society. If you read the credits at the back of the book, you will find that Ricks has been listening to a pathetic little club of failed military types and sensation-seeking professors who have tried to rescue stagnant careers by raving about the secession of America's officer corps from its citizenry. This is shameful nonsense. If anyone is alienated from middle America, it is our domestic elites and their Washington panders, who—far too important in their persons to serve in uniform—no longer have the decency to reserve their sympathy for America's enemies until those enemies are defeated. It was not the folks back home who panicked at the success of American arms in Desert Storm or who rewarded the Somalis who dragged a soldier's corpse through the streets by running away. Americans are fighters. It doesn't take a village, it takes a backbone."

⁹⁰ See, for example, Bob Woodward, *The Commanders*, 315: "Cheney had also discovered that some of the flexibility that all presidents wanted in the [Single Integrated Operation Plan], and had ordered in a series of presidential directives, was missing. For example, the ability to demonstrate restraint to the Soviets by limiting or controlling the size of a nuclear attack was not there. These issues went right to the heart of presidential and civilian control over the military."

⁹¹ See Cohen, "The Civil-Military Balance," 32: "Seared by its experience in Vietnam, the officer corps reacted by seeking to manipulate political leaders and

The Alternative

There is an alternative. A more complete, accurate, and balanced view of peace operations can replace the current prevailing view. Civilian and military leaders can base decisions relating to military funding, deployment, organization, equipment, and training on a clearer understanding of how peace operations affect readiness for war. They can counteract the particular ways in which Task Force Myth's readiness for combat may erode during months of duty in Bosnia, while also relying upon any of the ways in which it's combat readiness may improve during those months of duty.

More specifically, decision-makers can fully acknowledge the relative frequency of peace operations and incorporate a realistic picture of the Army's workload into planning assumptions. Measures of readiness can reflect the value of exposing units, leaders, and soldiers to the friction inherent in all overseas deployments while accounting for the wear and tear and other deficiencies caused by those deployments. Training can better cultivate the "mental agility" necessary to prepare soldiers for both peace operations and combat. Doctrine can more fully account for differences between types of peace operations and for similarities between certain peace operations and war, while tactics and techniques can build upon these differences and similarities. Military leaders can express principled reservations about aspects of peace operations without either

processes so that any commitment to conflict would be made under circumstances that it approved."; Kohn, "Out of Control," 9: "Even more troubling, General Powell took it upon himself to be the arbiter of American military intervention overseas, an unprecedented policy role for a senior military officer, and the most explicit intrusion into policy since MacArthur's conflict with Truman."

casting the legitimacy of such operations into doubt or raising concerns about the maintenance of civilian control.

In short, we can take peace operations seriously as inevitable training grounds for future combat even as we note and respect their differences from traditional wars. In a passage describing how British colonial campaigns prepared Churchill's generals for World War II, John Keegan himself exemplifies the alternative to viewing peace operations as distractions:

The small wars of empire gave [British officers] frequent practice in the command of troops in action; the politics of empire, which underlay such wars, accustomed them to co-operating with imperial civil servants in the implementation of strategies which, though small in scale, were often complex in nature; while the varied terrain and climate of the empire itself, and the absence of resources and difficulties of supply in remote campaigning-grounds imposed an excellent practical training in logistics.⁹²

Within Keegan's own currency of soldiering, the "small wars of empire" were most certainly also "small change," consisting as they usually did of sporadic, small-scale fighting rather than "battles." Yet the differences between the colonial campaigns and those against the Axis Powers do not prevent Keegan from identifying key parallels in the demands both types of campaign placed upon generalship.⁹³ Our challenge is to adopt a

⁹² John Keegan, introduction to *Churchill's Generals*, ed. John Keegan (London: George Weidenfeld & Nicolson, Ltd., 1991), 9.

⁹³ The search for key differences and parallels between colonial and conventional warfare is a stated objective of the core course in military history for officers attending the Command and General Staff College at Fort Leavenworth. See Lawrence A. Yates, "Advance Sheet, Lesson 13," in U.S. Army Command and General Staff College, *C610 Syllabus/Book of Readings* (Fort Leavenworth: USACGSC, August 1997), 362 (questioning students, on the basis of assigned readings about French, British, and American colonial campaigns, "[c]an a military officer be equally proficient in both colonial warfare and conventional warfare?"); Ibid. at 366: "As students examine the

similarly balanced view of United States peace operations, one that uncovers not only considerations relating to the readiness of generals, but also guidance for the combat preparation of units and soldiers.

assigned readings, they should be cognizant not just of the ways in which different countries devised different approaches to colonial warfare at different times and places, but also of the dynamics by which conventional military institutions adjusted to unorthodox military operations and the impact that this adjustment had on the ability of those institutions to fight traditional wars.”

CHAPTER 3

THE MECHANICAL PARADIGM OF READINESS

To overcome the problems inherent in the prevailing view it is not enough simply to expose those problems on a symptomatic level. The symptoms identified in chapter 2 are readily apparent to the receptive mind. Yet one who concedes that peace operations are frequent, are beset with friction, and are better served by soldier initiative than soldier passivity may still believe strongly that they detract from the mission to fight real wars. One who recognizes differences between peace operations—i.e., that peace enforcement in Bosnia approximates wartime conditions more closely than peacekeeping in Macedonia—may still insist that both are poor training grounds for war. One who acknowledges that peace operations are legitimate military missions may still maintain that they are unwise, regardless of their legitimacy.

A compelling alternative to the prevailing view must do more than treat symptoms. It must build upon descriptive analysis, upon a diagnosis of the prevailing view in general terms. A persuasive alternative must sort the various assumptions and propositions of the prevailing view into categories and suggest causes. In other words, it must develop a theory, however tentative, of why the prevailing view persists even after confrontation with points that are problematic for it. Moreover, this theory must organize

our knowledge about the effects of peace operations on Army combat forces while also suggesting ideas for specific actions consistent with our newly organized knowledge.⁹⁴

The remainder of this paper develops such a theory. A close analysis of unit status reports, of combat training centers, and of mission essential task lists contributes the core of the theory. The role of these three fixtures in how the Army perceives and evaluates its own ability to fight wars cannot be overstated. The theory also sifts and sorts raw information from surveys, interviews, and research pertaining to five important peace operations in the 1990s, as well as from historical accounts of past wars. Whenever possible, Task Force Myth provides the context for illustrations of theoretical concepts.

In short, the theory is that a flawed paradigm of readiness underlies and explains the prevailing view of peace operations. The term “paradigm” is not used casually here. Since 1962, when Thomas Kuhn employed the notion to expose the structure of scientific

⁹⁴ With the support of my thesis committee, I have departed somewhat from the strict research model and methodology described in Director of Graduate Degree Programs, *Student Text 20-10: Master of Military Art and Science (MMAS) Research and Thesis* (Ft. Leavenworth: U.S. Army C&GSC, July 1997), 10-22, to pursue Michael Howard’s definition of military science as “no more than disciplined thinking about military affairs.” Michael Howard, “Military Science in an Age of Peace,” *RUSI, Journal of the Royal United Services Institute for Defence Studies* 119 (March 1974): 3, 4. I assess survey data, interviews, reports, and other primary evidence, along with secondary sources, within a framework for disciplined thinking commonly used to address large, complex questions. The framework can be depicted graphically using the circle chart presented in Figure 2. Chapters 2 through 5 of this thesis correspond to the four quadrants of the circle. I am indebted to Dr. William Gregor for acquainting me with authoritative works in decision-making and problem-solving theory, such as David Braybrooke and Charles E. Lindblom, *A Strategy of Decision* (New York: The Free Press, 1963), which helped me settle upon a framework for this paper.

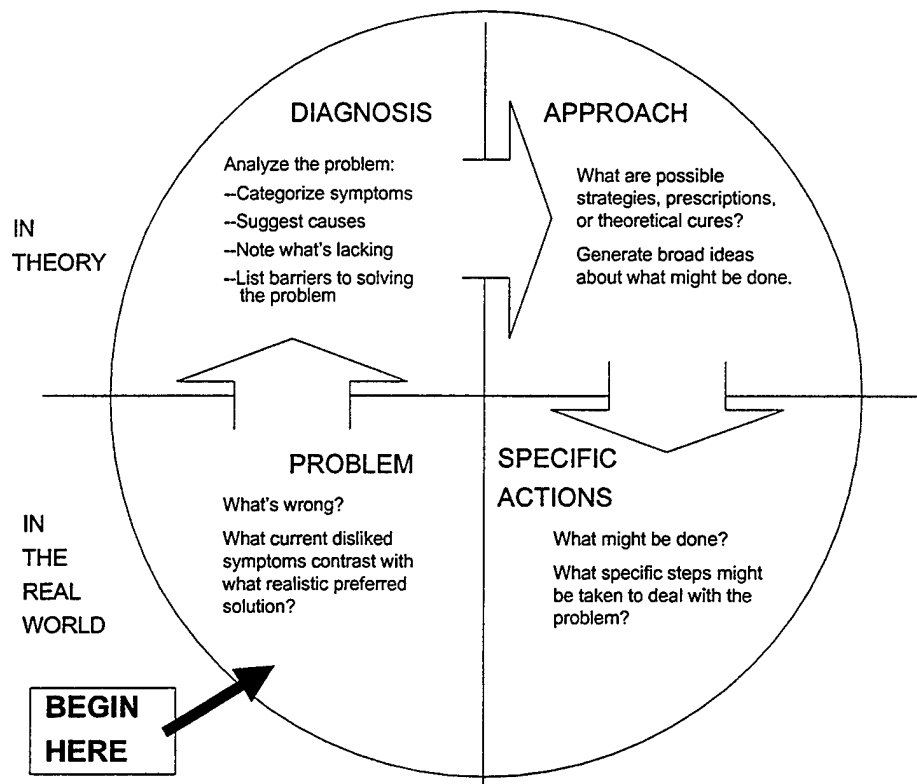


Figure 2. A Framework for Disciplined Thinking. Source: Roger Fisher and William Ury, *Getting to Yes: Negotiating Agreement Without Giving In* (New York: Penguin Books, 1983), 70.

revolutions,⁹⁵ all manner of social scientists, legal scholars, physicians, psychologists, educators, management theorists, and military analysts have claimed to hail new paradigms.⁹⁶ In the past fifteen years alone, for instance, social scientists have been

⁹⁵ Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).

⁹⁶ One informal measure of the popularity of Kuhn's term is that an Alta Vista Internet search for "paradigm" yielded 286,660 "hits." See <http://au.yahoo.com/bin/query?p=paradigm&hc4&hs=219>; accessed 26 April 1998.

courted with "Rasch measurement,"⁹⁷ the medical community with "holistic healing,"⁹⁸ and military professionals with everything from "uncomfortable wars"⁹⁹ to "the revolution in military affairs,"¹⁰⁰ all supposedly grounded in dramatic paradigm shifts.¹⁰¹ While there is no intrinsic harm to importing the paradigm concept from Kuhn's

⁹⁷ M. Singleton, "Rasch Measurement as a Kuhnian Revolution," in *The Institute for Objective Measurement* (Chicago: MESA Press and MESA Psychometric Laboratory, 1997).

⁹⁸ M.H. Cohen, "A Fixed Star in Health Care Reform: The Emerging Paradigm of Holistic Healing," *Arizona State Law Journal*, vol. 27 (1995), 79.

⁹⁹ John R. Galvin, "Uncomfortable Wars: Toward a New Paradigm," *Parameters* (Winter 1986): 7.

¹⁰⁰ See, e.g., Gordon R. Sullivan and Anthony M. Coroalles, *The Army in the Information Age* (Carlisle Barracks, Pa.: US Army War College, Strategic Studies Institute, 31 March 1995), 1819; David Jablonsky, *Paradigm Lost? Transitions and the Search for a New World Order* (Carlisle, Barracks, PA: Strategic Studies Institute, 1993); Ralph Peters, "After the Revolution," *Parameters*, (Summer, 1995): 7.

¹⁰¹ One indication that the notion of the paradigm is separable from the most recently touted revolution in military affairs (RMA) is that some of RMA's most vocal proponents do not speak in terms of paradigm shifts. See, for example, Joseph S. Nye, Jr. and William A. Owens, "America's Information Edge," *Foreign Affairs* (March/April 1996): 20-35; Eliot A. Cohen, "A Revolution in Warfare," *Foreign Affairs* (March/April 1996): 37-54. One commentator who finds neither a paradigm shift nor a revolution in RMA is John A. Lynn, "The Evolution of Army Style in the Modern West, 800-2000," *The International History Review*, vol. XVIII, Issue 3 (August 1996): 505-45. Another, who draws a distinction between "paradigm shifts" and "paradigm reinterpretations" and places RMA in the latter is Robert F. Baumann, "Historical Perspectives on Future War," *Military Review* (March-April 1997): 40-48. For other perspectives on the nature of the RMA, see Michael Mazarr, *The Revolution in Military Affairs: A Framework for Defense Planning* (Carlisle, PA: U. S. Army War College, 1994); Jeffrey R. Cooper, *Another View of the Revolution in Military Affairs* (Carlisle, PA: U.S. Army War College, 1994); Paul Brachen and Raoul Henri Alcalá, *Whither the RMA: Two Perspectives on Tomorrow's Army* (Carlisle, PA: U.S. Army War College, 1994); Steven Metz and James Kievit, *The Revolution in Military Affairs and Conflict Short of War* (Carlisle, PA: U.S. Army War College, 1994); Earl H. Tilford, Jr., *The Revolution in Military Affairs: Prospects and Cautions* (Carlisle, PA: U.S. Army War College, 1994); Douglas A. MacGregor, *Breaking the Phalanx* (London: Praeger, 1997).

discipline, the history of the basic sciences, prudence and precision demand that the term be defined before proceeding.¹⁰²

A paradigm is a collection of assumptions about the world, by which individuals define the boundaries of their inquiry into that world.¹⁰³ A paradigm gains adherents when it explains observed reality more readily than do alternative paradigms. Adherents deny or explain away problems and methods that lie outside the paradigm. Kuhn notes that those who follow the accepted paradigm are welcomed within the dominant community, while those who articulate problems or solutions in terms other than those supplied by the paradigm are shunned. Alternative methods are regarded as implicit assaults on the existing order, and because they are frequently resisted rather than assimilated, the process of paradigm-shifting tends to be revolutionary rather than evolutionary.

Spectacular achievements form the basis for a new paradigm. These achievements must have two characteristics.¹⁰⁴ First, they must be sufficiently unprecedented to attract an enduring group of adherents away from the old paradigm. Second, they must be sufficiently open-ended to suggest refinements, or smaller problems

¹⁰² See, for example, Daniel G. Cedarbaum, "Paradigms," in *Studies in History and Philosophy of Science*, ed. Gerd Buchdahl (Oxford: Pergamon Press, Ltd., 1984), 173, 174: "The fundamental obstacle to a proper understanding of [*The Structure of Scientific Revolutions*] results from the fact that the term 'paradigm', as Kuhn has said of the book as a whole 'can be too nearly all things to all people.'" (quoting Thomas S. Kuhn, *The Essential Tension: Selected Studies in Scientific Tradition and Change* (Chicago: The University of Chicago Press, 1977), 293).

¹⁰³ See Kuhn, *Structure of Scientific Revolutions*, 10.

¹⁰⁴ See *ibid.*

to solve. Kuhn called the work left undone by the initial spectacular achievements “normal science.” Great progress can be made by normal science in the wake of a paradigm shift because adherents are not always challenging first principles.¹⁰⁵ A classic example is the work done by normal science to measure the gravitational constant within Newtonian physics, a parameter undetermined by the path-breaking Newton himself.

A paradigm shift is preceded by the discovery of “anomalies.”¹⁰⁶ Anomalies are observations or data that the old paradigm explains awkwardly or not at all. Frequently, Kuhn perceived, it is the young or those new to the field who take the anomalies seriously, describe them using distinct concepts, and eventually exert pressure on the categories and procedures of the old paradigm. Being less committed to the old paradigm, they are more capable of conceiving a new one. An older paradigm confronted with a growing number of anomalies is said to be in “crisis.”

Each of these defining attributes describes the flawed paradigm of readiness that is responsible for the prevailing view of peace operations. That paradigm is “mechanical,” in that it conceives of war as the natural extension of competing military machines. The role of materiel is dominant, and both soldiers and units exist principally to service the vast array of lethal weapons that technological advances and the

¹⁰⁵ See *ibid.*, 76: “So long as the tools a paradigm supplies continue to prove capable of solving the problems it defines, science moves fastest and penetrates most deeply through confident employment of those tools. The reason is clear. As in manufacture so in science—retooling is an extravagance to be reserved for the occasion that demands it. The significance of crises is the indication they provide that an occasion for retooling has arrived.”

¹⁰⁶ See *ibid.*, 52-65.

procurement race have placed before them. Notwithstanding official pronouncements to the contrary, numbers of weapons and soldiers and units, and a particular sort of training that stresses technical competence with those weapons, are more important than morale and character. The brute apparent strength and size of the machine are regarded as more accurate reflections of readiness than the demonstrated functioning of the whole under conditions of stress and adversity.

The mechanical paradigm of readiness emerged during the first World War, following a century in which genuine social, industrial, organizational, and technological revolutions shook the world and the foundations of warfare. Since World War I, this paradigm has sponsored an enormous amount of “normal military science”—evolutionary refinements that have not challenged the basic assumptions about how a nation’s army readies itself for war. The balance of this chapter charts the history of the mechanical paradigm, examines the highest forms these refinements have taken in the United States Army since the Great War, and then describes recent developments that have pushed the mechanical paradigm into crisis.

The History of the Mechanical Paradigm

The century leading up to World War I unleashed enormous forces that would find expression within the mechanical paradigm of warfighting strength. By 1815, Napoleonic France had already undergone fundamental sociopolitical and organizational changes in the wake of the French Revolution, and France’s European rivals spent much of the 19th century catching up. Waves of conscripts, and later reservists, came to fill the

ranks of most serious field armies.¹⁰⁷ Entire nations took to arms.¹⁰⁸ In the first fifty years following the Peace of Paris, warfare witnessed breathtaking advances in technology—from steam power, to the electric telegraph, to the mass-produced rifled musket, to the Minie ball.¹⁰⁹ Then, as World War I approached, the battlefield was further transformed by railroads that ran efficiently and on time, by high explosive and smokeless ammunition propellant, by recoilless and quick-fire cannons, and by machine guns and magazine-loaded rifles.¹¹⁰

In Prussia, and later throughout the western world, military education and professionalism kept pace with technological change through the rise of the general staff. Scharnhorst's general staff of 1809 has been termed "the brains and the nerve center" of the Prussian army,¹¹¹ but Max Weber's more apt characterization of the institution that later evolved alludes to "specialization," and "bureaucratic rationalization" that could

¹⁰⁷ See generally Hajo Holborn, "The Prusso-German School: Moltke and the Rise of the General Staff," in Peter Paret ed., *Makers of Modern Strategy from Machiavelli to the Nuclear Age* (Princeton: Princeton University Press, 1986), 282. See also Captain Jonathan M. House, *Toward Combined Arms Warfare: A Survey of 20th Century Tactics, Doctrine, and Organization* (Fort Leavenworth: Combat Studies Institute, 1984), 7-9.

¹⁰⁸ It is important to note that before 1914, the United States and Great Britain were exceptions to the "Nation in Arms" trend. See, for example, Larry H. Addington, *The Patterns of War Since the Eighteenth Century*, 2d ed. (Bloomington: Indiana University Press, 1994), 112-113.

¹⁰⁹ See generally House, 7-8. See also Michael Howard, "Men Against Fire: The Doctrine of the Offensive in 1914" in Paret, *Makers of Modern Strategy*, 511.

¹¹⁰ See House, *Toward Combined Arms Warfare*, 8.

¹¹¹ Holborn, "The Prusso-German School: Moltke and the Rise of the General Staff," 283.

accommodate the growing complexity of warfare.¹¹² The rise of the general staff is closely identified with von Moltke the Elder, who as a general staff officer in the 1840s studied topography and geography, prepared a detailed technical map of Silesia, and deepened his military education on specialized topics. These activities built upon the rigorous studies he had begun years earlier at the Prussian War College.¹¹³ Later, when von Moltke became chief of the general staff, Prussia relied upon technical staff studies and plans that calculated how quickly armies could be mobilized and transported by rail to a point of concentration.¹¹⁴ Von Moltke's successor, von Schlieffen, accelerated the reliance upon technical staff work in devising the famous war plan for enveloping the French army with a grand thrust through Belgium.¹¹⁵

These technological and institutional developments furnished elements essential to the mechanical paradigm, even as they produced the established order that would be challenged and ultimately replaced by that paradigm. When swift victory eluded the German general staff in 1914, the paradigm shift had begun. The spectacular achievements cementing the shift would take place between 1916 and 1918, under the

¹¹² Raymond Aron, *Main Currents in Sociological Thought 2: Pareto, Weber, Durkheim* (Middlesex, U.K.: Penguin Books, 1967), 219, 247-48; Max Weber, *Economy and Society*, ed. Guenther Roth and Claus Wittich and trans. Ephraim Fischoff et. al., (Berkeley: Univ. of Calif. Press, 1978), vol. 1, 223-26 and vol. 2, 980-82.

¹¹³ The commandant at the time of Moltke's attendance was Carl von Clausewitz. Holborn, "The Prusso-German School: Moltke and the Rise of the General Staff," 284.

¹¹⁴ *Ibid.*, 287.

¹¹⁵ See also Gunther E. Rothenberg, "Moltke, Schlieffen, and the Doctrine of Strategic Envelopment," in Paret, *Makers of Modern Strategy*, 296.

brilliant if reckless Third Supreme Command of Hindenburg and Ludendorff. Michael Geyer explains:

The Supreme Command's reforms amounted to a comprehensive effort to 'rationalize' warfare much in the same way that German industry 'rationalized' production. The substitution of machines for men forced the adaptation of the army to the handling of 'war machines.' The shift from hierarchical structures to functional ones was a drastic, even revolutionary step, because it shed more than a century of military traditions within half a year. The Supreme Command began to approach operations in terms of 'tasks' and 'available resources,' assessing units according to their weapons capabilities. Battle plans were drawn up accordingly, stressing the capabilities of the assembled weaponry rather than specific principles of strategy. The optimal use of weapons, instead of the 'art' or 'science' of military leadership, was seen as guaranteeing military victory. *Material* won out over *Geist* as the contemporary debate put it—or more precisely: technical and instrumental rationality replaced the remnants of a holistic approach to the conduct of war. Operational planning and strategy became a matter of the management of arms. It is this system that made Ludendorff and the Third Supreme Command into the most radical exponents of machine-culture in the military.¹¹⁶

That the potent Ludendorff offensives of 1917 ultimately failed, resulting in eventual victory for Germany's enemies, did not slow conversion to the new paradigm. By 1945, all significant armies had accepted it.¹¹⁷

¹¹⁶ Michael Geyer, "German Strategy in the Age of Machine Warfare, 1914-1945" in Paret, *Makers of Modern Strategy*, 541.

¹¹⁷ Ibid., 543: "The German transition to a military machine-culture, which by 1945 was accepted by all armies, brought to an end a century of land warfare. The formation of a military machine-culture and the instrumental organization of units undermined the very essence of the Prusso-German military institution and profession, traditionally based on uniformity, hierarchy, and subordination. It altered the way battles were fought and armies were organized, and created a new kind of military leader, who developed the laws of operations from the available means rather than deriving them from eternal and scientific laws of operational knowledge about war and leadership. The 'strategist' became the supreme organizer of weapons—or, to use the role model of the time, he turned into an engineer." For one perspective of the achievements of the Third Supreme Command, see Timothy T. Lupfer, *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War* (Fort Leavenworth: Combat

Acceptance by the United States Army began with the mustering of the American Expeditionary Force (AEF) in 1917. In July of that year, the G-3 section of Pershing's General Headquarters (GHQ) determined that the AEF would use heavy French howitzers for artillery support. These 75mm and 155mm guns influenced the size and organization of American divisions, which the GHQ designed to be large and heavy in infantry and artillery.¹¹⁸ These features would permit the envisioned advances against German defenses arrayed in depth. Already consistent with the mechanical paradigm of readiness, the GHQ organized and began training the AEF to permit the most rational and effective employment of its borrowed weapons systems.¹¹⁹

The development of combined arms warfare and the introduction of armored and air power to the battlefields of World War II only accelerated the acceptance of the mechanical paradigm. In England, J.F.C. Fuller and later Sir Basil Liddell Hart advocated a mechanized army, built around the firepower and mobility of the tank.¹²⁰

Studies Institute, 1981). See also Keegan, *Face of Battle*, 234: "The appearance of the machine-gun, therefore, had not so much *disciplined* the act of killing – which was what seventeenth-century drill had done – as *mechanized* or *industrialized* it."; Alfred Vagts, *The History of Militarism* (New York: W.W. Norton & Company, Inc. 1937), 235: "When the militaristic way is followed in war, there are high losses in men and little inclination to think of reducing them by the most effective and persistent application of machines and materials."

¹¹⁸ Timothy K. Nenniger, "Tactical Dysfunction in the AEF, 1917-1918," *Military Review* 51, no. 4 (October 1987): 177-81.

¹¹⁹ See, for example, Addington, *The Patterns of War Since the Eighteenth Century*, 161.

¹²⁰ Brian Bond and Martin Alexander, "Liddell Hart and De Gaulle: The Doctrines of Limited Liability and Mobile Defense," in Paret, *Makers of Modern Strategy*, 598-623, 601-02 (containing statements of Liddell Hart quoted here).

After early fits and starts, mechanization flourished on both sides of the Atlantic. Liddell Hart speculated excitedly that the tank presaged “the revival of generalship and the art of war, in contrast to its mere mechanics.” Yet while the tank later “rescue[d] . . . mobility from the toils of trench warfare,” the dream that a mechanized army would actually prove less mechanical was not to be. The age had come that force structure and training of men were to be designed around the combination of weapons systems perceived to produce the most potent battlefield effects.¹²¹ That age would not soon pass. Even more radical was the acceptance of the mechanical paradigm by those less committed to vested interests in land warfare. The theory and practice of air warfare—as propounded by Douhet, Mitchell, and Seversky—literally began from the assumption that all future military doctrine should acknowledge a particular weapon (the aircraft) as the predominant instrument of war.¹²²

Although the mechanical paradigm of readiness became so dominant that army professionals scarcely contemplated developments in this light, army tactical doctrine in

¹²¹ See, for example, Major Robert A. Doughty, *The Evolution of US Army Tactical Doctrine, 1946-76* (Fort Leavenworth: Combat Studies Institute, 1979), 5; Christopher R. Gabel, *See, Strike, and Destroy: U.S. Army Tank Destroyer Doctrine in World War II* (Fort Leavenworth: Combat Studies Institute, 1985), 67; Mark S. Watson, *United States Army in World War II (The War Department)—Chief of Staff: Prewar Plans and Preparations* (Washington, D.C.: Department of the Army Historical Division, 1950), 148n, 156, 158, 204, 238, 366 (describing efforts of General Leslie McNair to develop the triangular division).

¹²² David MacIsaac, “Voices from the Central Blue: The Air Power Theorists,” in Peter, *Makers of Modern Strategy*; Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington: Indiana University Press, 1977), 223-241.

the United States from 1945 to 1976 was the product of evolutionary advances within the paradigm. For instance, in 1955, the doomsday weapons—atomic bombs—stimulated the development of the pentomic division and concomitant doctrine and training for dispersing units throughout a checkerboard battlefield so as to avoid atomic strikes.¹²³ Later, the helicopter formed the center of air mobile doctrine and training that would prove effective, though not determinative of the war's outcome, in Vietnam. General Eisenhower's warning during this period against the influence of the "military industrial complex" encountered the response Kuhn predicts when a major assumption of the dominant paradigm is questioned. The warning was vehemently opposed, or ignored altogether.

Following the United States defeat in Vietnam, the strongest voice to emerge in the Army on readiness was that of General William H. DePuy, the Commander of the United States Army's newly formed Training and Doctrine Command from 1974 to 1977. DePuy's efforts to "harness doctrine in the service of reform"¹²⁴ would lead to an influential new field manual. That manual, championed principally by proponents of armored and mechanized forces, would spawn training and doctrine institutions that today

¹²³ Doughty, *The Evolution of US Army Tactical Doctrine*, 17-18.

¹²⁴ See Roger J. Spiller, "In the Shadow of the Dragon: Doctrine and the US Army After Vietnam," *RUSI, Journal of the Royal United Services Institute for Defense Studies* (December 1997): 1, 7.

represent the highest form of the mechanical paradigm.¹²⁵ DePuy's thinking on readiness was straightforward:

DePuy believed that the Army's increased dependency on highly sophisticated weapons and equipment and the support services necessary to sustain them signaled the Army's evolution from an organization of people with weapons to an *organization of weapons with crews*. In this sense, the Army was becoming more like the Air Force and Navy and needed to prepare accordingly.¹²⁶

One of DePuy's proteges, Brigadier General Paul Gorman, instituted the training and evaluation system designed to accompany the new doctrine. This system demanded "performance-oriented training," along with a comprehensive assessment of each task that a warfighting unit and its soldiers would need to perform on a battlefield featuring the new weapons and equipment.¹²⁷

¹²⁵ A popularized account of the Army's reforms in the wake of Vietnam appears in General Fred Franks and Tom Clancy, *Into the Storm* (New York: G.P. Putnam's Sons, 1997), 84-165. Franks and Clancy describe the procurement of the "big five" weapons systems--the M1 Abrams, the Bradley, the Apache, the Blackhawk, and the Patriot--and the placement of armored and mechanized maneuver warfare at the center of doctrine. See also Richard M. Swain, "AirLand Battle," (Fort Leavenworth, KS: School of Advanced Military Studies Unpublished Manuscript, December 1997).

¹²⁶ Major Paul H. Herbert, *Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations* (Fort Leavenworth: Combat Studies Institute, 1988), 95 (emphasis added). See also General William E. DePuy, Commanding General, U.S. Army Training and Doctrine Command, "The Army Training System Overview," (speech to the TRADOC/FORSCOM Training Conference IV, at TRADOC Headquarters, Fort Monroe, Virginia, 24 May 1977), reprinted in *Selected Papers of General William E. DePuy*, ed. Richard M. Swain (Fort Leavenworth, KS: Combat Studies Institute, 1994), 225-37, 36: "The Air Force is an industrialized business and many of the methods they have developed are going to have to be adopted by the Army to cope with our problems."

¹²⁷ Spiller, "In the Shadow of the Dragon: Doctrine and the US Army After Vietnam," 7. See also Richard M. Swain, "Filling the Void: The Operational Art and the U.S. Army," in B.J.C. McKercher and Michael A. Hennessy, eds., *The Operational Art: Developments in the Theories of War* (Westport, CT: Praeger, 1996), 147-172. Gorman's

The mechanical paradigm of readiness ushered in by Ludendorff—and, arguably, taken to its logical extreme by DePuy—still lives. Though nascent even at the mechanical paradigm’s inception, “anomalies”¹²⁸ have received greater attention since the end of the Cold War. Perhaps this is because the United States army is unrivalled in its dominance and thus can reflect upon approaches other than the optimal use of weaponry. Perhaps this is because ambitious claims for a new family of weapons and communications systems have stretched the credulity even of believers in the machine culture. Many of the anomalies appear in their modern manifestations during peace operations.

Under the theory offered by this paper, the prevailing view of peace operations—that they are distractions from the business of preparing for real wars—serves the purpose of dismissing anomalies they generate and resisting alternative paradigms they may encourage. By its nature, this theory cannot be conclusively proved or disproved. Yet the possibility remains that the mechanical paradigm’s survival or decay will determine the U.S. Army’s readiness for the next war, whatever shape that war may take.

Unit Status Reporting

The mechanical paradigm of readiness is today embodied in the Unit Status Reporting System. The stated objective of that system is “to provide . . . [t]he current

system would eventually provide the model for Joint training. See Chairman of the Joint Chiefs of Staff, *Manual 3500.04: Universal Joint Task List (UJTL)* (Washington, D.C.: CJCS, 13 Sept. 1996).

¹²⁸ See the discussion of anomalies within Kuhn’s theory of paradigms above at notes 105-106 and accompanying text.

status of U.S. Army units to National Command Authorities (NCAs), the Organization of the Joint Chiefs of Staff (OJCS), HQDA, and all levels of the Army chain of command.”¹²⁹ Unit status reports seek “to portray Army-wide conditions and trends,” to identify factors “which degrade unit status,” to assist in allocating resources, and to “[a]llow senior decision-makers to judge the employability and/or deployability of reporting units.”¹³⁰

¹²⁹ See Department of the Army, *Regulation 220-1—Unit Status Reporting* (Washington, D.C.: Dep’t of Army, 1993), para. 1-1.

¹³⁰ Ibid. The Army’s Unit Status Reporting System implements a joint services program that has nearly identical purposes. See Joint Chiefs of Staff, *Publication 1.03-3: Status of Resources and Training System (SORTS)* (Washington, D.C.: Operations Directorate, Command Systems Operations Division, J-3, Joint Staff, 1993). See generally John C. F. Tillson, “Building a Joint Training Readiness Reporting System,” *Joint Force Quarterly* (Summer, 1996): 22-28. For the past year, the Secretary of Defense has been submitting quarterly readiness reports to Congress pursuant to a statutory requirement:

Quarterly readiness reports

(a) Requirement. - Not later than 30 days after the end of each calendar-year quarter, the Secretary of Defense shall submit to the Committee on Armed Services of the Senate and the Committee on National Security of the House of Representatives a report on military readiness. The report for any quarter shall be based on assessments that are provided during that quarter -

(1) to any council, committee, or other body of the Department of Defense (A) that has responsibility for readiness oversight, and (B) the membership of which includes at least one civilian officer in the Office of the Secretary of Defense at the level of Assistant Secretary of Defense or higher;

(2) by senior civilian and military officers of the military departments and the commanders of the unified and specified commands; and

(3) as part of any regularly established process of periodic readiness reviews for the Department of Defense as a whole.

(b) Matters To Be Included. - Each such report shall -

(1) specifically describe identified readiness problems or deficiencies and planned remedial actions; and

(2) include the key indicators and other relevant data related to the identified problem or deficiency.

Our Lieutenant Colonel Chris Myth, like all battalion commanders in the Army, files a unit status report each month during his command. The Unit Status Report System establishes the readiness criteria against which he rates Task Force Myth: (1) C-1, indicating that the unit is fully ready to perform the wartime mission for which it was organized, designed, or tasked; (2) C-2, indicating that the unit is substantially ready; (3) C-3, indicating that the unit is marginally ready; (4) C-4, meaning that the unit is not ready; (5) C-5, meaning that the unit is not combat ready by design, such as a unit being redesigned or re-equipped.¹³¹ The C-ratings ("C" stands for "category") attempt to provide a standardized scale of unit readiness measured at a selected point in time.

The Unit Status Reporting System measures four areas: personnel, training, equipment on hand, and equipment serviceability. Each of these areas generates a separate rating that the commander considers before determining the C-rating for his unit.

Lieutenant Colonel Myth assesses his unit's personnel status from a "P-level," which compares the number of soldiers, the number of soldiers qualified in their assigned specialties, and the number of soldiers in senior grades with predetermined "wartime requirement[s]."¹³² The P-level is the latest in a tradition of strength reports that extends

(c) Classification of Reports. - Reports under this section shall be submitted in unclassified form and may, as the Secretary determines necessary, also be submitted in classified form.

10 U.S.C. § 482 (1997).

¹³¹ Battalions, separate companies, and separate detachments prepare Unit Status Reports. See *Army Regulation 220-1*, para. 2-2.

¹³² *Ibid.*, ch. 4.

back to the Grand Army of Napoleon. Because it incorporates a comparison of the simple headcount of the battalion to a fully manned battalion of the same type, the P-level preserves a useful piece of the pre-mechanical paradigm, in which readiness was linked to raw numbers of soldiers in the ranks.¹³³ Because it also incorporates a measure of how many soldiers in the battalion are qualified in their specialties—specialties distinguishable by the particular weapons and equipment employed—the P-level furthers the mechanical paradigm’s conception of a battalion as “an organization of weapons with crews.”¹³⁴

Myth assesses the training readiness of the task force from a “T-level” that purports to indicate “the current ability of the unit to perform assigned wartime missions.”¹³⁵ The ability to perform wartime missions, in turn, is a function of proficiency in “mission essential tasks.”¹³⁶ Training doctrine requires Myth to derive the

¹³³ See, for example, Ardant Du Picq, *Battle Studies*, trans. Col. John N. Greely and Major Robert C. Cotton, in *Roots of Strategy, Book 2: 3 Military Classics*. (Harrisburg, PA: Stackpole Books, 1991), 157: “The Theory of Strong Battalions--Today, numbers are considered the essential. Napoleon had this tendency (note his strength reports). The Romans did not pay so much attention to it. What they paid most attention to was to seeing that everybody fought. We assume that all the personnel present with an army, with a division, with a regiment on the day of battle, fights. Right there is the error.”

¹³⁴ Recall the quotation of General William DePuy in the text accompanying note 126 above.

¹³⁵ See *Army Regulation 220-1*, para. 7-1.

¹³⁶ See U.S. Department of the Army, *Field Manual 25-100: Training the Force* (Fort Monroe, VA: Nov. 1988), Glossary-5 (defining “mission essential task” as “[a] collective task in which a unit must be proficient to accomplish and appropriate portion of its wartime mission(s)”).

mission essential tasks of his unit by analyzing various sources that suggest how his unit would be employed in wartime¹³⁷ and to submit his unit's mission essential task list (METL) to the next senior commander for approval.¹³⁸ When determining the unit's T-level, Myth first assesses its ability to execute these mission essential tasks. He makes use of personal observations, records, reports, and the assessments of others (both inside and outside of the unit). Then he estimates the number of training days needed for his unit to achieve full proficiency in the mission essential tasks. The estimated number of training days needed to reach full proficiency determines the unit's T-level.¹³⁹ Because METLs consist of collective tasks that can be accomplished only through the proficient operation of hundreds of individual and crew-served weapons and items of equipment,¹⁴⁰ the T-level itself is a sophisticated composite index of readiness under the mechanical paradigm.

Before Myth assesses the overall readiness of his task force each month, he also considers an "S-level" that reflects what proportion of the unit's weapons and equipment are on hand¹⁴¹ and an "R-level" that indicates how well the unit is maintaining its on-

¹³⁷ Ibid., p. 2-1 (listing as examples wartime operations and contingency plans, mission training plans, mobilization plans, and installation wartime transition and deployment plans, force integration plans).

¹³⁸ Ibid., p. 2-7.

¹³⁹ See *Army Regulation 220-1*, para. 7-5.

¹⁴⁰ See, for example, U.S. Department of the Army, *Field Manual 25-101: Battle Focused Training* (Washington, D.C.: Sept. 1990), 2-4.

¹⁴¹ See *Army Regulation 220-1*, ch. 5.

hand equipment.¹⁴² The calculation of these two indicators—both unambiguous features of the mechanical paradigm of readiness—relies upon careful collection of data from subordinate units and upon formidable expertise from Myth's staff. The S-level is a comparison of "the fill of selected equipment to wartime requirements."¹⁴³ The unit's modified table of organization and equipment (MTOE) establishes its "wartime requirements,"¹⁴⁴ and the levels of all of the principal weapons systems and equipment¹⁴⁵ as well as specified "pacing items"¹⁴⁶ and "support items of equipment"¹⁴⁷ are checked against the levels in the MTOE.¹⁴⁸ The R-level is calculated by comparing the "FMC rates" of various samples of equipment on hand and selecting the lowest of these.¹⁴⁹ The

¹⁴² Ibid, ch. 6.

¹⁴³ Ibid, para. 5-1.

¹⁴⁴ See *ibid.*, para. 1-6b: "As a general policy, all equipment listed on the unit TOE is considered minimum mission-essential to allow the unit to execute its primary combat tasks and provide sustainment capability" (citing U.S. Department of Army, *Regulation 71-31: Management System for Tables of Organization and Equipment*).

¹⁴⁵ These have Equipment Readiness Code A/P (ERC A/P). *Ibid.*, para. 5-1.

¹⁴⁶ These have Equipment Readiness Code P (ERC P). *Ibid.*

¹⁴⁷ These have Equipment Readiness Code P (ERC B/C). *Ibid.*

¹⁴⁸ The unit's overall equipment-on-hand S-level is equal to the lower of the ERC P/A or ERC P computations. *Ibid.*

¹⁴⁹ The calculation is as follows:

The R-level is calculated by comparing the aggregate Fully Mission Capable (FMC) rate for "all on hand reportable equipment" regardless of ERC and including pacing items and a separate calculation for each "individual pacing item" (ERC-P). The unit's overall R-level is equal to the lower of these determined R-levels. While FMC, as determined by the "Not ready if" column of the Preventative Maintenance Checks and Services (PMCS) in the TM -10/20 series manuals, is the criteria for USR computations, the goal of Army maintenance is to eliminate all deficiencies in the PMCS, including those that do not cause the equipment to be rated as "not ready". The goal is for all

FMC rate of a sample of equipment is the proportion of that equipment that is “fully mission capable” as that term is defined by Army technical manuals for equipment maintenance.

Almost in recognition that too strict reliance on these four readiness indicators alone will yield anomalous outcomes, the Army requires that Lieutenant Colonel Myth exercise independent judgment.¹⁵⁰ For instance, even if the unit is at S-2, Myth has the discretion to assess the unit at C-1 overall. Myth also has discretion within the T-level, given that his personal observations are important bases of the unit’s training readiness rating. Furthermore, in the regulation governing the readiness reporting system, the Army formally cautions that “Unit Status Reports are designed to measure the status of resources and training of a unit at a given point in time,” and that “[t]he report[s] should not be used in isolation when assessing overall unit readiness or the broader aspect of Army readiness.”¹⁵¹ Elsewhere, the regulation hedges that “these reports do not contain all of the information needed to manage resources” and that they “identify problem areas,

units to maintain their on hand equipment to an R-1 level regardless of their assigned ALO.

Ibid., para. 6-1.

¹⁵⁰ Ibid., para. 1-6: “The status of each measured resource area (personnel, equipment on hand, equipment serviceability, and training) is assigned a numerical category level. In addition, each commander determines an overall unit status level based on a combination of the unit’s measured resource area levels and his or her professional judgment.” See also para. 9-1 (detailing guidance on Commander’s Remarks).

¹⁵¹ Ibid., para. 1-5a(1).

but in many cases these problems must be examined using more detailed personnel, logistic, and training administrative systems to determine causes and solutions.”¹⁵²

Still, command discretion and formal cautions aside, decision-makers at higher levels expect the report to be “a timely single source document for assessing key elements of a unit's status.”¹⁵³ It is precisely the “streamlined” nature of such reports that enables them to “retain their operational utility.”¹⁵⁴ Besides, there are surely limits to the extent of command discretion, even if these are unwritten. If his battalion rates a P-1, T-1, S-1 and R-1 in a particular reporting period, Lieutenant Colonel Myth will look arbitrary if he rates the unit at anything less than a C-1 overall. Similarly, if the battalion were to be P-4¹⁵⁵, T-4,¹⁵⁶ S-4,¹⁵⁷ and R-4,¹⁵⁸ Myth could not justify a high C-rating without fundamentally questioning the unit's pre-established manning, mission essential tasks, and organization. In gross and over time, then, the Unit Status Report system produces concise, quantified data that purport to measure readiness. Moreover, consistent with the prevailing mechanical paradigm of readiness, these data are heavily weighted with

¹⁵² Ibid., para. 1-5a(2).

¹⁵³ Ibid.

¹⁵⁴ Ibid.

¹⁵⁵ The approximate meaning of which is that it has less than sixty-nine percent of its personnel strength. See *ibid.*, Table 4-1.

¹⁵⁶ Meaning that the commander estimates forty-three or more days are needed to train the unit to standards on mission essential tasks. See *ibid.*, Table 7-1.

¹⁵⁷ The approximate meaning of which is that it has less than sixty-four percent of its equipment on hand. See *ibid.*, Table 5-1.

¹⁵⁸ The approximate meaning of which is that less than fifty-nine percent of its on-hand equipment is fully mission capable. See *ibid.*, Table 6-1.

weapons and equipment factors. Congress and senior civilian and uniformed leaders rely upon these data.¹⁵⁹

Hypothetical (but realistic) data from Task Force Myth's reports in the months preceding the battle of Chagang-do help illustrate the role of the Unit Status Reporting system within the current paradigm of readiness.¹⁶⁰ Myth's entries in "Commander's

¹⁵⁹ See, for example, U.S. General Accounting Office, *Report Number NSIAD-86-94, Unit Training: How It Is Evaluated And Reported To The Congress* (Washington, D.C.: GAO, June 1986), 14; U.S. General Accounting Office, *Report Number NSAIID-97-107, Military Readiness: Improvements Still Needed in Assessing Military Congress* (Washington, D.C.: GAO, March 1997); U.S. General Accounting Office, *Report Number NSAIID-98-126, Military Readiness: Observations on Personnel Readiness in Later Deploying Army Divisions* (Washington, D.C.: GAO, 20 March 1998); Winslow Wheeler, Report to the Senate Budget Committee on Visits to the National Training Center and the Joint Readiness Training Center 30 Nov.-5 Dec., 105th Cong., 1st sess., Dec. 1997 (citing "extremely serious Army-wide personnel and training (i.e., readiness) problems," such as fifty percent understaffing in infantry and mechanic positions). The data also receive the attention of the news media when readiness is a matter of public or Congressional concern. See, for example, "Another Hollow Army?" *U.S. News and World Report*, Nov. 15, 1993, 50 ("Fully one fourth of the units in the army are reporting that they are 'Category 2,' meaning they have only about nine men where they need 10."); "Pentagon: Peacekeeping Not Hurting Readiness," *Leavenworth Times*, 24 Dec. 1997, A-12; Richard J. Newman, "Can Peacekeepers Make War?," *U.S. News and World Report*, 19 Jan. 1998, 39, 43 ("[Chairman of the Joint Chiefs of Staff Henry H. Shelton] and others say that the Pentagon's carefully monitored readiness statistics do not indicate serious degradations in the force.").

¹⁶⁰ For the data in Table 1, I thank Colonel Michael W. Alvis, who is currently Senior Fellow, U.S. Institute of Peace, and who from January to July of 1997 was Deputy Division Chief, Force Readiness Division, Directorate of Operations, Readiness and Mobilization, U.S. Army Deputy Chief of Staff for Operations. Colonel Alvis reviewed the entire mass of unit status reports submitted by units participating in operations in Bosnia and on 17 November 1997 forwarded a sample of representative reports to me. Except for the dates, the unit name, and the pre- and post-deployment locations, the data in these tables—and the commanders' comments—match those of reports submitted by actual mechanized infantry battalions that deployed to Bosnia. Because the unit identifications remain classified, they are not revealed here. See also Colonel Michael W. Alvis, former Deputy Division Chief, Force Readiness Division, Directorate of

Remarks” for June through October 1999, justified the C-1 ratings with reference to the unit’s favorable performance at the National Training Center in June 1999 (see Table 1). His remarks from November 1999 to June 2000 justified C-1 ratings with reference

Table 1. USR Data for Task Force Myth
Before and During Deployment

Month	Unit Location	Over-all	Pers- onnel	Train- ing	Equip- ment on Hand	Service- ability
<i>Year 1999</i>						
Jun	Ft. Hood	C-1	P-2	T-1	S-3	R-1
Jul	Ft. Hood	C-1	P-2	T-1	S-3	R-1
Aug	Ft. Hood	C-1	P-3	T-1	S-3	R-1
Sep	Ft. Hood	C-1	P-3	T-1	S-3	R-1
Oct	Ft. Hood	C-1	P-2	T-1	S-3	R-1
Nov	Deploying	C-1	P-2	T-1	S-3	R-1
Dec	Deploying	C-1	P-2	T-1	S-3	R-1
<i>Year 2000</i>						
Jan	Bosnia	C-1	P-1	T-1	S-3	R-1
Feb	Bosnia	C-1	P-1	T-1	S-1	R-1
Mar	Bosnia	C-1	P-1	T-1	S-1	R-1
Apr	Bosnia	C-1	P-1	T-1	S-1	R-1
May	Bosnia	C-1	P-1	T-1	S-1	R-1
Jun	Ft. Hood	C-1	P-1	T-1	S-1	R-1

to “continued METL proficiency” gained as a result of the operational deployment to Bosnia itself.¹⁶¹ His remarks in March, April and May 2000 also made reference to

Operations, Readiness and Mobilization, U.S. Army Deputy Chief of Staff for Operations, interview by author, 29 December 1997, in Washington, D.C.

¹⁶¹ The rationale for such justification appeared in a quote attributed to “Commander of a Brigade Combat Team” in the first report on operations in Bosnia prepared by the Army’s center for lessons learned:

training in gunnery that the unit received in March at Taborfalva, Hungary, where the Army maintains a modern training facility designed specifically for units in Bosnia. By June 2000, Myth also was partially—and implicitly—justifying the C-1 ratings with his own relatively long experience in command. He had begun the scheduled two-year command tour in January 1999 and had led the unit at the National Training Center during its June rotation there.

Indeed, it is plausible to assume that one factor in Task Force Myth's selection for our hypothetical North Korea deployment would have been Myth's experience. The important thing to note here, however, is that if Myth's battalion were to follow the pattern of other units, its readiness under the mechanical paradigm would sharply drop following completion of its participation in the peace operation—regardless of Myth's

As you know we had a couple of standoffs; we got real close in terms of planning—into heavy operations. The brigade staff was synchronizing the close air support, the heavy artillery, the maneuvers, putting it all together—ground, air, and JAAT—in quick order. I'm convinced that we are not losing that much in our ability to conduct heavy operations.

I read a lot that would indicate that folks within the Army think we're losing a lot of our skills in terms of heavy operations. Some of that's obviously true. But crews are spending lots of time in Bradleys and tanks. The artillery community is working hard here. We do daily hip shoots—dry. Much work is being done to keep those skills up to a high level. The engineers have never worked as hard as they do in this sector. These guys do more combat engineering in a month than most engineers do in an entire career—with mine clearance overwatch, route clearance, construction of cantonment areas—the basecamps—they're stressed out. And within this command post, the planning process has not suffered a bit. Everything is doctrinally applied. So I'm very happy with it. I think that this brigade could transition to heavy operations in short order."

Center for Army Lessons Learned, *Initial Impressions Report: Operation Joint Endeavor, Bosnia-Herzegovina* (Fort Leavenworth: CALL, May 1996), 54.

experience and regardless of any “METL proficiency” gained from the deployment itself. Had Task Force Myth remained at Fort Hood following its Bosnia rotation, its reports could be expected to resemble the ratings, taken from actual readiness reports, reflected in Table 2. In his accompanying remarks, Lieutenant Colonel Myth would likely have made reference to a mass exodus of personnel in July, August, and September due to the backlog of scheduled reassignments and soldier schooling that could not be relieved

Table 2. USR Data for Task Force Myth
Following Deployment

Month	Over-all	Pers- onnel	Train- ing	Equip- ment on Hand	Service- ability
<i>Year 2000</i>					
Jul	C-2	P-2	T-2	S-2	R-1
Aug	C-2	P-2	T-2	S-1	R-1
Sep	C-3	P-3	T-2	S-1	R-1
Oct	C-3	P-3	T-2	S-1	R-1
Nov	C-3	P-3	T-2	S-1	R-1

while the unit was deployed.¹⁶² The “T-2” rating, a strong contributing factor in the lower C-ratings, would have become unavoidable because more than a year had passed since the unit’s rotation at the National Training Center. Even assuming, as we did in chapter 1, that Task Force Myth was quickly notified of the Chagang-do mission after returning from Bosnia—and thus that personnel losses due to reassignment and schooling

¹⁶² U.S. Department of the Army, U.S. Army Training and Doctrine Command, Center for Army Lessons Learned, *Special Study: The Effects of Peace Operations on Unit Readiness* (Fort Leavenworth: CALL, February 1996), A-4 and A-5.

could be minimized—this training shortfall would be critical. Under the mechanical paradigm of readiness, the battle drill rehearsals, small arms marksmanship, and gunnery tasks executed during the deployment and at Taborfalva are simply not adequate substitutes for the comprehensive training in METL tasks that occurs at the National Training Center and at the other Combat Training Centers.¹⁶³

Combat Training Centers

In the 1990s, it has become difficult to exaggerate the importance of the Combat Training Centers to official thinking about readiness.¹⁶⁴ Although their dynamism, their stressful yet systematic approach to unit performance, and their sheer success have inevitably confronted the mechanical paradigm of readiness with anomalies, the centers themselves nevertheless continue to be sanctuaries for adherents to that paradigm. The four centers are well-resourced and elaborate training grounds where Army units are

¹⁶³ Unit Status Reporting data from the Haiti deployment reveal similar patterns to those from Bosnia, though the lighter force structure (and therefore mission essential task lists that exclude employment of armored and mechanized vehicles), the mission, the threat, and the terrain resulted in somewhat weaker downward pull on T-ratings in the months following deployment. Again, I thank Colonel Michael W. Alvis, see *supra* note , for reviewing the entire mass of unit status reports submitted by units participating in operations in Haiti and in February 1998 forwarding a sample of representative reports to me for analysis.

¹⁶⁴ See, for example, Newman, "Can Peacekeepers Make War?," 39: "During a November mock battle at the Army's National Training Center at Fort Irwin, Calif., the division's gunners failed to destroy any of the antiaircraft missiles of the 'opposition force.'"; Wheeler, Report to the Senate Budget Committee, (basing report on readiness problems upon observations made at the National Training Center and the Joint Readiness Training Center).

tested in mission essential tasks.¹⁶⁵ The first center to be established was the National Training Center, which opened at Fort Irwin, California in October, 1981 following a four-year effort begun by then Brigadier and later Major General Paul Gorman—DePuy's protégé—to reform Army training institutions in the aftermath of Vietnam.¹⁶⁶

The National Training Center was a natural outgrowth of the training and evaluation system Gorman had developed with DePuy's strong support in the mid-1970's. As Richard Swain describes,

Gorman began a process to produce a Cartesian analysis for every combat task (i.e., to reduce each task to its simplest components) and then to establish standards of performance against which their execution could be evaluated. Gorman and DePuy drew upon new laser technologies to lay a foundation for evaluated free-play exercises, and, ultimately, to create the National Training Center in California. Although the actual conduct of training remained the province of unit commanders, Training and Doctrine Command established the standards and methodologies that govern army training to this day.¹⁶⁷

¹⁶⁵ See generally Daniel P. Bolger, *Dragons At War: Land Battle in the Desert* (Novato, CA: Presidio Press, 1986). Dep't of Army, Reg. 350-50, Combat Training Center Program at 1-5b(4) (June 1993) (Interim Draft).

¹⁶⁶ See generally Anne W. Chapman, *The Origins and Development of the National Training Center, 1976-1984* (Fort Monroe, VA: Office of the Command Historian, United States Army Training and Doctrine Command, 1992); Anne W. Chapman, *The National Training Center Matures, 1985-1993* (Fort Monroe, VA: Office of the Command Historian, United States Army Training and Doctrine Command, 1997); John L. Romjue, Susan Canedy, and Anne W. Chapman, *Prepare the Army for War: A Historical Overview of the Army Training and Doctrine Command, 1973-1993* (Fort Monroe, VA: Office of the Command Historian, United States Army Training and Doctrine Command, 1993).

¹⁶⁷ Swain, "Filling the Void: The Operational Art and the U.S. Army," 152-53.

Although the Gorman initiatives, to include the National Training Center, were part of a so-called "revolution" in training,¹⁶⁸ it is clear that the major impetus was the lethality and range of modern weapons demonstrated during the mechanized battles of the 1973 Arab-Israeli war.¹⁶⁹ The subsequent reshaping of United States Army doctrine and institutions thus merely applied greater rigor and different weapons systems to training that otherwise had much in common with that undertaken in the German Army in the latter part of World War I.¹⁷⁰ From 1916-1918, German tactical doctrine incorporated concepts of elastic defense-in-depth and combined arms offense, which were disseminated to units through an effective and realistic training program.¹⁷¹ The Gorman initiatives also resembled other effective training that had occurred since World War I in other armies around the globe.¹⁷²

This is not to discount the genuine innovations associated with the establishment of the National Training Center. As the Army emerged from Vietnam with doubts about its readiness to face the threat of Soviet aggression in Europe, it refined and then

¹⁶⁸ Chapman, *The Origins and Development of the National Training Center*, 7. See also Thomas N. Burnette, Jr., "The Second Training Revolution," *Army* (Oct. 1997): 111-16; Anne W. Chapman, *The Army's Training Revolution, 1973-1990: An Overview* (Fort Monroe, VA: Office of the Command Historian, United States Army Training and Doctrine Command, 1991), 3.

¹⁶⁹ See, for example, Spiller, "In the Shadow of the Dragon: Doctrine and the US Army After Vietnam," 6.

¹⁷⁰ See, for example, Lupfer, *The Dynamics of Doctrine*, 24, 43-44.

¹⁷¹ *Ibid.*

¹⁷² See, for example, Slim, *Defeat Into Victory*, 142-146 (describing how the British-Indian 15 Corps conducted training on the Ranchi plateau in 1942-43 that would lead to Japanese defeat in 1945).

implemented three promising training concepts at Fort Irwin. The first was that of the "box." The thought was to put armored and mechanized infantry battalions into a desert area as big as Rhode Island wearing eyesafe lasers and alarms that would permit tanks, armored personnel carriers, and soldiers to shoot and be shot.¹⁷³ The unit and all of its equipment were transported to and then isolated on the large but bounded training ground, where the flow of logistical and other support could be strictly controlled to enhance realism and preclude resort to outside resources.

The second concept was that of the "OPFOR." Joining the training unit in the box was an opposing force (OPFOR) of superior numbers that had been equipped with Warsaw Pact weapons and schooled in Warsaw Pact doctrine, tactics, and strategy. Like the training unit, the OPFOR wore lasers, enabling unscripted, "force on force training" to occur. The OPFOR routinely bested the training unit. It enjoyed not only the advantage of numbers: its soldiers had mastered the terrain of Fort Irwin in rotation after rotation of training, and they spent more time each year in the field perfecting their individual and small unit skills.

The third concept was that of the "operations group." This consisted of several hundred permanently assigned observer-controllers, whose duties were roughly analogous to those of referees in a boxing match. The referee analogy, however, fails to capture the fact that the operations group carefully compared unit performance to the

¹⁷³ The lasers and alarms comprised the newly procured Multiple Integrated Laser Engagement System (MILES). See Chapman, *The Origins and Development of the National Training Center*, 68-70.

standards that had begun to appear in written manuals during mid-seventies, when Gorman had spurred the creation of the Army Training and Evaluation (ARTEP) System.¹⁷⁴ The operations group gathered data on the training unit's performance, analyzed it, and determined how and whether the unit had completed its collective wartime tasks as published in these manuals.¹⁷⁵ Sophisticated sensors, instrumentation, displays, and audiovisual technology helped the operations group present this information during "after-action reviews" or "AARs." In AARs, observer-controllers conducted a Socratic dialogue that explored what had happened during a particular battle, and why it had happened that way.

The National Training Center today justifiably receives a generous share of the credit for the United States Army's resurgence after Vietnam. It also garners praise for its contribution to the credibility of United States conventional deterrence in the latter part of the Cold War and for its preparation of the armored and mechanized units that helped defeat Iraq in 1991.¹⁷⁶

¹⁷⁴ This was the formal name for the system developed by Gorman, as discussed above in notes 127 and 167 and accompanying text. See also Romjue, *Prepare the Army for War*, 23-24 (describing the ARTEP within the larger Systems Approach to Training (SATS)).

¹⁷⁵ These manuals were known as ARTEP manuals or "Mission Training Plans," which also described the conditions and standards to which different types of units were expected to perform the tasks. Although today observer-controllers no longer meticulously adhere to the training and evaluation outlines contained in mission training plans, these outlines remain an important source of guidance. Major James Cassella, former Observer-Controller at the National Training Center, interview by author, 9 April 1998.

¹⁷⁶ See, for example, Chapman, *The National Training Center Matures*, xi: "The victory achieved by the U.S. Army, its sister services, and the United States' allies over

The three other combat training centers are best understood as attempts to replicate the successful innovations of the National Training Center.¹⁷⁷ The Combat Maneuver Training Center in Hohenfels, Germany provides a box, an OPFOR, and an operations group for units based in Europe. The Joint Readiness Training Center, in Fort Polk, Louisiana provides a box, an OPFOR, and an operations group for airborne, air assault, and other special and light units.¹⁷⁸ Though its "box" is a notional one dictated by a computerized simulation program rather than by physically bounded terrain, the Battle Command Training Program offers an OPFOR and an operations group designed to train division and corps commanders and staffs in command and control.¹⁷⁹

Iraq in the Gulf War to liberate Kuwait, seemed to vindicate the Army's huge investment in the CTCs to provide highly realistic tactical engagement and live-fire training."

¹⁷⁷ See, for example, Lieutenant Colonel Thomas D. Morgan, "BCTP: Preparing for War," *Military Review* (Nov. 1989): 2-10 ("The success of the Army's National Training Center (NTC), Fort Irwin, California, has been the catalyst for the initiation of a broader combat training center (CTC) program.").

¹⁷⁸ See Draft Army Regulation 350-50.

¹⁷⁹ See *ibid.* This brief discussion of the four combat training centers is not intended to suggest that they uniformly adhere to the mechanical paradigm of readiness. The Joint Readiness Training Center and Combat Maneuver Training Center have both taken significant steps to ready training units for situations other than mechanized, attrition warfare on a sterile battlefield. See, for example, Bolger, *Battle for Hunger Hill*; Center for Law and Military Operations, *Tackling the Contingency Deployment: A Judge Advocate's Guide to the Joint Readiness Training Center* (Charlottesville, VA: The Judge Advocate General's School, 1996); Center for Army Lessons Learned, *Initial Impressions Report 1, Bosnia*, xiii. See also Lieutenant Colonel Paul D. Hughes, U.S. Army, Office of the Deputy Assistant Secretary of Defense for Peacekeeping and Humanitarian Assistance, "Peace Operations Training," unpublished 14-page paper that describes, among other things, JRTC peacekeeping rotations by units of the 25th Infantry Division and the 82d Airborne Division in 1994 (copy in possession of the author); Lieutenant Colonel Paul D. Hughes, U.S. Army, Office of the Deputy Assistant Secretary of Defense for Peacekeeping and Humanitarian Assistance, "The Evolving Nature of Peace Operations," unpublished and unofficial analysis that contains a description, in paragraph

While the combat training centers are essentially paradigmatic of prevailing notions of readiness, they have also given rise to anomalies that challenge the mechanical paradigm. They have demonstrated the importance of testing the functioning of units under conditions of stress and adversity and have validated the role of morale and character in fighting forces. This is an insight at odds with a tidy equation between readiness and numbers of weapons and crews. The centers have also convincingly established the utility of after-action review sessions and associated processes for capturing and recording lessons.¹⁸⁰ These sessions and processes implicitly acknowledge the human elements that enable units, and the Army, to become “learning organizations.”¹⁸¹ In this way the mechanical paradigm has generated the very developments that have come to undermine it.¹⁸²

Even though he might feel that the National Training Center rotation of June 1997 did not incorporate aspects—such as civilians on the battlefield—that could have better prepared his task force for Bosnia, Chris Myth also felt that the Combat Training Centers

7, of tactical peace operations tasks trained at Army training centers (copy in possession of the author).

¹⁸⁰ See U.S. Department of the Army, *Regulation 11-33, Army Lessons Learned Program: System Development and Application* (Washington, D.C.: 10 Oct. 1989).

¹⁸¹ See, for example, U.S. Army Center for Army Leadership, Revised Initial Draft of Field Manual 22-100, *Army Leadership* (Fort Leavenworth: 1 Nov. 1997), pp. 6-29 to 6-30, 8-55 to 8-56, and 10-22 to 10-25 (describing leadership of learning organizations and citing Peter M. Senge, *The Fifth Discipline: The Art and Practice of The Learning Organization* (New York: Currency Doubleday, 1990)).

¹⁸² See generally Robert F. Baumann, “Historical Perspectives on Future War,” *Military Review* (March-April 1997), pp. 40-48, 45 (describing this feature of paradigms).

contributed greatly to readiness, however defined. In the latter, he joined the consensus within the Army. Like the Bosnia deployment, the National Training Center rotation demanded enormous efforts from subordinate commanders and leaders while challenging individual soldiers and small teams to perform tasks in a dynamic, arduous, austere setting. Unlike the Bosnia deployment, it also enabled Task Force Myth to move and fire almost all of its MTOE equipment and weapons over rugged terrain, often in darkness. Also unlike the Bosnia deployment, the rotation comprehensively tested him, as well as his brigade commander and other battalion commanders in the brigade, on the complex tasks associated with command and control¹⁸³ of combined arms operations.¹⁸⁴ Though only four weeks long, the rotation exercised all of the unit's battlefield operating systems¹⁸⁵ and most of its METL.

¹⁸³ See U.S. Department of Defense, *Joint Pub. 1-02, Dictionary of Military and Associated Terms*, 77, which defines "command and control" as follows: "The exercise of authority and direction by a properly designated commander over assigned forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission."

¹⁸⁴ See U.S. Department of the Army, *Field Manual 101-5-1: Operational Terms and Graphics* (Washington, D.C.: 30 Sept. 1997), 1-32 to 1-33, which define "combined arms" as follows: "The synchronized or simultaneous application of several arms, such as infantry, armor, artillery, engineers, air defense, and aviation, to achieve an effect on the enemy that is greater than if each arm was used against the enemy in sequence."

¹⁸⁵ See *ibid.*, which defines "battlefield operating systems" as follows: "A listing of critical tactical activities. The BOS provide a means of reviewing preparations or execution in discrete subsets. Critical to this review is the synchronization and coordination of activities not only within a BOS, but among the various BOS. The BOS are not all inclusive: they include intelligence, maneuver, fire support, mobility and survivability, air defense, combat service support, and command and control but do not address timing, tempo, reconnaissance, information operations, or tactics."

The Mission Essential Task List

The METL of Task Force Myth—along with the Army doctrine that enshrines the METL as a pivotal apparatus in achieving training readiness—subtly perpetuates both the mechanical paradigm and the related view of peace operations as distractions. The fundamental concept behind the METL is that a unit “cannot achieve and sustain proficiency on every possible training task.”¹⁸⁶ The commander must be selective. Hence, Army doctrine formally defines “mission essential task” as “a collective task in which an organization must be proficient to accomplish an appropriate portion of its wartime mission(s).”¹⁸⁷ The “mission essential task list,” in turn, is “a compilation of collective mission essential tasks which must be successfully performed if an organization is to accomplish its wartime mission(s).”¹⁸⁸ The circularity is removed from these definitions only when one examines which tasks commanders typically include on their units’ METLs. The METL comprises specific tasks that effectively define the unit mission while exposing key assumptions about the nature of the “wartime” for which the unit must get itself ready.¹⁸⁹

When originally developing his METL, our Lieutenant Colonel Chris Myth paid close attention to the general mission for which his battalion task force was designed: “to

¹⁸⁶ See *Field Manual 25-100*, 2-1.

¹⁸⁷ *Ibid.*, Glossary-5.

¹⁸⁸ *Ibid.*

¹⁸⁹ This paper uses the concept of the METL as a point of entry into an entire system of training that is described in Romjue, *Prepare the Army for War*, 21-40 and elsewhere.

close with the enemy by means of fire and maneuver in order to destroy or capture him, or to repel his assault by fire, close combat, and counterattack.”¹⁹⁰ Accordingly, in spite of the global realities that would cause Task Force Myth to participate in a peace operation devoid of conventional enemy forces, the tasks of “assault” and “defend” formed the heart of Task Force Myth’s METL.¹⁹¹ Similarly, the company teams forming the battalion task force included these tasks on their METLs.¹⁹² Examination of the “defend” task in the context of the hypothetical battle of Chagang-do helps illustrate the deficiencies in the mechanical paradigm.

In our hypothetical battle, as Chinese tanks and armored personnel carriers stream south across the Yalu, the performance of the crew in the M1A2 Abrams tank closest to Lieutenant Colonel Chris Myth would provide him a graphic and visible measure of the impact of the Bosnia deployment on his unit’s readiness. Assume that tank, one of the

¹⁹⁰ U.S. Department of the Army, *Field Manual 71-2, The Tank and Mechanized Infantry Battalion Task Force* (Washington, DC: 27 September 1988), 1. Similarly, the doctrinal mission of the next higher echelon of command, the brigade, was “to close with and destroy enemy forces using its mobility, firepower, and shock effect . . . [and to] defeat[] enemy assault by defensive fires, obstacles, and counterattacks.” U.S. Department of the Army, *Field Manual 71-3, Armored and Mechanized Infantry Brigade* (Washington, DC: 11 May 1988), 1-1. Note 137 above lists other sources to which Lieutenant Colonel Myth would have turned to develop his METL.

¹⁹¹ The tasks, conditions, and standards for the battalion defend task appears in a training and evaluation outline (T&EO) contained in U.S. Department of the Army, *ARTEP 71-2-MTP: Mission Training Plan For The Tank And Mechanized Infantry Battalion Task Force* (Washington, D.C.: 3 Oct. 1988), Task 7-1-3009.

¹⁹² The tasks, conditions, and standards for the company team’s defend task appear in U.S. Department of the Army, *ARTEP 71-1-MTP: Mission Training Plan For The Tank And Mechanized Infantry Company And Company Team* (Washington, D.C.: 3 Oct. 1988), Task 17-2-1021.

fourteen in Task Force Myth, is part of a platoon defensive position. A platoon consists of four tanks. Each tank is manned by a crew consisting of a tank commander, a gunner, a driver, and a loader.¹⁹³

Task Force Myth and the Battle of Chagang-do

Having advanced through withering artillery and air-to-surface rocket fire, four Chinese Type 79 tanks closed in on the Abrams tank, the primary, alternate, and supplementary firing positions of which Myth himself had inspected. Standards of execution for the “defend” task require the United States tank to defeat four enemy tanks. The firing positions, selected prudently by the platoon leader, were well-dug by supporting engineers equipped with bulldozers, loaders, and backhoes. The tank enjoyed excellent observation and fields of fire over likely enemy avenues of approach, a sturdy

¹⁹³ The details of this hypothetical tank engagement are accurate. See, for example, U.S. Department of the Army, *ARTEP 17-237-10-MTP: Mission Training Plan For The Tank Platoon* (Washington, D.C.: 3 Oct. 1988), Task 17-3-0225 (“Execute A Platoon Defensive Mission”); U.S. Department of the Army, *Soldier Training Publication STP 17-19K1-SM: Soldier's Manual MOS 19K M1/M1A1/M1A2 Abrams Armor Crewman Skill Level 1* (Washington, D.C.: 1 November 1994), Task 171-126-1068 19K (“Troubleshoot The 120mm Main Gun On An M1A1/M1A2 Tank”); U.S. Department of the Army, *Soldier Training Publication STP 17-19K23-SM: Soldier's Manual MOS 19K M1/M1A1/M1A2 Abrams Armor Crewman Skill Level 2/3* (Washington, D.C.: 15 December 1994), Task 171-126-1115 19K (“Troubleshoot Fire Control System On An M1A2 Tank”), Task 171-126-1036 19K (“Engage Targets With The Main Gun From The Gunner's Station On An M1/M1A/M1A Tank”); U.S. Department of the Army, *Field Manual 17-15: Tank Platoon* (Washington, D.C.: 3 Apr. 1996); U.S. Department of the Army, *Field Manual 17-12-1-1: Tank Gunnery (Abrams) Volume I* (Washington, D.C., 19 Mar. 1993); U.S. Department of the Army, *Field Manual 17-12-1, Tank Combat Tables M1* (Washington, D.C.: 3 Nov. 1986); Glen A. Meade, *M1 Tank Gunnery: A Detailed Analysis of Conditions, Behaviors, and Processes* (Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, June 1989).

and invisible hide position, and a good network of trails enabling rapid movement between firing positions. Each of the tank's various firing positions permitted quick adjustment from "turret-down" scanning for targets to "hull-down" firing. In Bosnia, between patrolling missions to enforce the Dayton Accord, Task Force Myth had been able to practice many of the tasks associated with the arrangement and construction of these positions.

The tank remained in its hide position until the loader—a fleet-footed soldier in an observation post about 200 meters in front of the tank—identified smoke, dust columns, and sounds of the approaching Chinese tanks. Upon receiving the loader's report, the tank commander ordered the loader to leave the observation post and return to the tank, and he directed the driver to start the tank and move it to the firing position. At the firing position, the driver maneuvered the tank so that only the turret was exposed to frontal view (the "turret-down" position) while the tank commander, the gunner, and the loader scanned their sector for the enemy tanks.

"Four T-79 tanks at two-zero-zero mils and two-six-five-zero meters," the tank commander barked into his radio headset to alert the crew and the platoon to the direction and distance of the sighted targets. He then layed the 120-mm main gun for direction, issued fire commands to the crew, oriented the gunner on the closest approaching enemy tank, and radioed the platoon leader, "Raptor is ready to engage." The platoon leader replied "Engage at the trigger point on your order." Precoordinated artillery and mortar fires rained down onto the enemy tanks, causing them to button up, disrupting their

advance, and exposing them to the big gun of Raptor—the unofficial name given to the tank by the affectionate crew. As the lead enemy tank reached a rock formation 2,500 meters to the front, the driver quickly rolled Raptor upward, exposing its turret. “Fire!”

The sabot round hurtled out of the long gun barrel of the Abrams and in an instant exploded the distant enemy tank. The crew readied Raptor to engage the second T-79. “Fire!” Another round blasted out of the main gun barrel, but this time the round missed its target and careened into the earth hundreds of meters short and to the left. Within seconds, the crew again loaded, fired, and missed, with the anti-tank round again detonating short and to the left of the approaching tank. Convinced now that the miss was not due to gunner error, the tank commander ordered the driver to “turret-down” while the crew initiated diagnostic checks. The gunner reported that the proper ammunition button on his primary sight had been pressed and that his control and display panel reflected the proper settings for the sabot ammunition. The computerized fire control system then completed its own automatic diagnosis, indicating that it was functioning properly. Next, the gunner reported the air temperature, ammunition temperature, barometric pressure, and crosswind readings from his panel, all of which appeared correct. Automatic sensors revealed no problems with “pitch and roll” and “hull/turret adjustment.”

As the crew reached the bottom of the diagnostic checklist, the problem finally revealed itself: the tank’s automatic “cant adjustment” device was not working. Several measurements with the gunner’s quadrant, a calculation to convert degrees to mils, and

two manual adjustments later, the main gun of Raptor was again capable of accurate fire. Within minutes, the Abrams destroyed the three remaining enemy tanks. It then moved to its supplementary firing position to engage additional enemy targets reported to be advancing from a different direction. Although the "cant adjustment" problem had never before plagued Raptor—not even during gunnery exercises at Taborfalva—the tank commander's anticipation of myriad similar problems during periods of inactivity had impelled him to conduct nonfiring drills with the crew in Bosnia. The self-imposed preparation had paid off.

The Power of Checklists for Training Tactical and Technical Tasks

While the individual soldier tasks and crew drills executed by the single Abrams crew would be essential building blocks of Task Force Myth's success in the battle of Chagang-do, the execution of the battalion-level defense would also require competence in hundreds of other individual, unit, and leader tasks. Would the other elements of the Task Force fare as well as Raptor? For example, Myth himself must ensure that the task force conducts effective counterreconnaissance to deny the advancing enemy knowledge of his positions. He must integrate his fire support and obstacle plans with the natural choke points and avenues created by the terrain. He must ensure subordinate units coordinate their fields and patterns of fire to eliminate deadspace and gaps in the defense and to conserve ammunition. He must see to it that the weapons receive adequate ammunition and that maintenance problems beyond the crews' capacity to fix are

promptly handled by specialists. He must decide to employ his reserve at the proper time.

All of these technical and tactical tasks, and many more, have been dutifully recorded in manuals and checklists derived from the “Cartesian analysis” that swept through the Army during the tenure of Depuy and Gorman at Training and Doctrine Command.¹⁹⁴ The manuals and checklists—many of them developed by the Armor Center at Fort Knox, the Aviation Center at Fort Rucker, the Field Artillery School at Fort Sill, and similar proponents of training on modern weapons and equipment—interlock. Together, they provide complex but orderly procedures for accomplishing tasks on the battalion’s METL. Appendix B reprints the cross-referenced excerpts of battalion, company, platoon, and soldier manuals applicable to Raptor’s engagement of the Chinese tanks. Today, these and similar manuals are readily available through the Army Training Digital Library, which maintains an exhaustive collection on the Internet.¹⁹⁵

Without such a system of manuals, and without unit METLs dedicated to developing competence on technical tasks and subtasks, actions like the cant adjustment made by Raptor’s crew would be impossible to train. With them such tasks are trainable. This fact is a crowning achievement of the mechanical paradigm and a major factor in the paradigm’s persistence. Yet close comparison of the excerpts at Appendix B to the fluid

¹⁹⁴ See Swain, “AirLand Battle,” 3-4.

¹⁹⁵ See <http://www.atsc-army.org/atdls.html>; accessed on 2 November 1997.

circumstances encountered by Task Force Myth reveals anomalies that performance checklists are ill-equipped to capture. The checklists inevitably give more weight to actions that are quantifiable and measurable, but no more essential to true readiness. They dictate correct use of the gunner's quadrant to assess whether the automatic cant adjustment device is working, but cannot dictate the initiative that impelled the tank commander to drill his crew during periods of inactivity in Bosnia. The manuals and checklists help school Lieutenant Colonel Myth to integrate artillery and tank fire with his obstacle plan but not to persuade local North Korean villagers to stay away from key movement routes during the battle. They state the ratio of enemy to friendly tanks that must be killed for a successful engagement but cannot precisely identify the stamina, calmness, morale, discipline, courage, and other human factors that also contribute to success in combat.

Peace Operations and "Crisis" Within the Mechanical Paradigm

In the 1990's, United States Army deployments in support of peace operations have pushed the mechanical paradigm of readiness into "crisis." The old paradigm cannot fully accommodate new discoveries (and rediscoveries) about the nature of operations other than war and new thinking about readiness in light of those discoveries. Diverse separate military activities, governmental agencies, and private individuals have considered the impact of peace operations upon readiness in the context of deployments this decade to the Sinai, Somalia, Haiti, Macedonia, and Bosnia, among others, and their research has generated anomalies for the mechanical paradigm. Yet this important

research has also had the curious effect of reinforcing that paradigm by attempting, in varying degrees, to explain key findings within the old terms or by declining to articulate an alternative.

CALL and the Return-to-Readiness Timeline

In June, 1994 the Army¹⁹⁶ tasked Training and Doctrine Command (TRADOC) to conduct a study to determine “the effect that participation in a peace operation has on unit readiness for combat operations.”¹⁹⁷ TRADOC relayed the tasking to the Center for Army Lessons Learned (CALL), with the specific guidance that CALL should develop “working timelines for units to prepare for a peace operation and then to return to a normal level of readiness afterward.”¹⁹⁸

This special study generated a wealth of material and provided a sizeable amount of primary source data for subsequent research by others. CALL examined peace operations in the Sinai, Macedonia, Somalia, and Haiti. It relied upon interviews, surveys, Unit Status Reporting (USR) data, unit files and records, and direct observation to collect information about the four areas that—following the USR system—it identified with readiness: personnel, training, equipment availability, and equipment readiness. CALL also sought to capture a cross-section of experience from combat arms, combat support, and combat service support units and personnel.

¹⁹⁶ Specifically, Headquarters, Department of the Army (Office of the Deputy Chief of Staff for Operations).

¹⁹⁷ Center for Army Lessons Learned, *Special Study*, 1.

¹⁹⁸ Ibid.

CALL surveyed a sample of officers and noncommissioned officers who had filled "key positions" during the deployments. These key positions included battalion commander, battalion executive officer, command sergeant major, primary and assistant staff officer, staff section noncommissioned officer in charge, company commander, company executive officer, platoon leader, platoon sergeant, and some squad and section leaders. The fifteen-part survey instrument collected 86 pieces of information pertaining each surveyed individual's deployment experience and perceptions of unit readiness. It sought detailed information about perceptions of individual and collective preparedness to conduct both the peace operation tasks and combat tasks. It sought perceptions of how well individuals and units were prepared before, during, and after the peace operation. Of those provided surveys, 221 turned in responses. Of these, 128 respondents were participants in peace operations in Haiti.

The CALL special study reported the following general observations from the survey:

- Key leaders perceive readiness in all areas (personnel, equipment, training) to fall well below predeployment levels immediately upon return from the peace operation and to stay below normal until the unit has been at home station between four and six months.
- Intensive training and recovery programs after participation in a peace operation generally enjoy success, causing the unit to exceed the normal readiness level following the four to six month period.
- Key leaders rated personnel readiness (essentially the overall level of staffing as well as the level of staffing in required occupational specialties and ranks) significantly lower than equipment and training readiness, and perceived that personnel readiness was slowest to return to predeployment levels.

The CALL special study identified four “emerging lessons” after analyzing its survey and other data:

- A Mission Training Plan for Operations Other Than War needs to be developed and supported.¹⁹⁹
- Department of the Army should consider authorizing a unit to report ‘C-5’ (under the Unit Status Reporting (USR) system) for four months after it returns from a peace operation.
- Department of the Army guidance is needed concerning how units that are deployed to Operations Other Than War report their readiness within the USR and how units supporting deployed units should report their readiness within the USR.
- Installations should develop “Return to Readiness” plans similar to current deployment plans.

The CALL study also prominently featured a “return to readiness timeline,” which identified phases (initial recovery, block leave, maintenance, personnel restructuring, individual training, collective training, transportation of equipment) and common issues associated with each phase (e.g., “catch-up on calibration schedule” during the maintenance phase).²⁰⁰ According to CALL, the ideal measure that a return to readiness has been completed is the unit’s participation in a Combat Training Center rotation with all of its assigned equipment and personnel.²⁰¹

¹⁹⁹ See *Field Manual 25-100*, Glossary-6, which defines “mission training plan” as follows: “Descriptive training document which provides units a clear description of ‘what’ and ‘how’ to train to achieve wartime mission proficiency. MTPs elaborate on wartime missions in terms of comprehensive training and evaluation outlines, and provide exercise concepts and related training management aids to assist field commanders in the planning and execution of effective unit training.”

²⁰⁰ See Center for Army Lessons Learned, *Special Study*, 11-12.

²⁰¹ See *ibid.*, Tables 1 and 15.

Even as it attempted to provide a timeline that could be methodically applied to units returning from peace operations, the CALL study noted a factor that could hasten the return to readiness:

A very important highlight is that units participating in peace operations develop very high levels of team cohesion which allow the unit to train quickly, if the team stays together.²⁰²

The finding that peace operations place units four to six months away from combat readiness is an intuitive one within the mechanical paradigm, but this reference to the importance of human factors is more difficult to assimilate, as is the finding that “motivated, trained, and disciplined soldiers” are the keys to success in both war and operations other than war.²⁰³ Similar observations about unit cohesion, training, motivation, and discipline surface in interviews with veterans of the Somalia and Haiti deployments, the major data sources of the CALL study.²⁰⁴

²⁰² See *ibid.*, 14, which also notes other factors muddying precise calculation of return to readiness time. Unfortunately, the team rarely seems to stay together. See *ibid.*, A-4: “Upon return from the deployment, all of those losses that would have been attrited over the last eight months (preparation time and the time actually deployed) occur. This attrition happens within about 30 to 90 days of the unit’s return. Most units report this figure at approximately 30 percent of unit strength.”

²⁰³ *Ibid.*, 17.

²⁰⁴ See, for example, Major Dave Stahl, Army Forces Plans Officer, Captain Mark D. Axelberg, Battle Captain for G-3 Operations, and Captain John L. Cuntz, Battle Captain for Army Forces Headquarters, all deployed in Somalia in 1993, group interview by Dr. Robert K. Wright, Jr., CMH Catalog No. RHIT-C-022 transcript, pages 115-119, Center for Military History, Washington, D.C.; Unnamed Captain, Joint Task Force Ground Operations Officer, 10th Mountain Division, deployed in Somalia in 1994 and 1995, surveyed by Major Paul M. Rivette, Center for Army Lessons Learned, in December 1995 for *Special Study*, survey forms on file with CALL; Colonel James Campbell, Chief of Staff, Joint Task Force 190, deployed in Haiti in 1994, interview by Colonel Dennis P. Mroczkowski, U.S.M.C., 22 October 1994, printed in *Oral History*

GAO and the Importance of Unit and Operation Types

In a 1995 report entitled *Peace Operations: Effect of Training, Equipment, and Other Factors on Unit Capability*²⁰⁵ the National Security and International Affairs Division (NSIAD) of the General Accounting Office examined, among other things, “what effect peace operations have on maintaining combat readiness.” It prepared the report in response to a request from Congress. The research methodology consisted of reviewing the experiences of combat, support, and special operations forces who participated in Operations Restore Hope in Somalia, Uphold Democracy in Haiti, Able Sentry in Macedonia, Deny Flight in Bosnia, and Provide Comfort in northern Iraq. Representatives of NSIAD visited home bases of units that had deployed on these peace operations, and in the case of Able Sentry, visited Macedonia during the conduct of the operation. Representatives also examined the CALL study, interviewed commanders concerning their assessment of units’ combat readiness, and reviewed documents pertaining to combat readiness status.

The GAO found, first, that “participation in peace operations can both enhance and reduce a unit’s war-fighting capability,” and, second, that “the extent to which peace operations affect combat capability depends upon a number of factors, including the type

Interviews: Operation Uphold Democracy, ed. Cythia L. Hayden (Fort Bragg, NC: XVIIIth Airborne Corps, 1995), 49-56.

²⁰⁵ U.S. General Accounting Office, *Report Number NSIAD-96-14, Peace Operations: Effect of Training, Equipment, and Other Factors on Unit Capability* (Washington, D.C.: GAO, October 1995).

of peace operation, the type of unit participating, the length of participation, and in-theater training opportunities.”

The report concluded that aviation, naval, ground support, special operations forces, and sometimes light infantry forces may gain “excellent experience that can improve [their] ability . . . to operate in combat scenarios.” Skills that could be improved during a peace operation included “command and control, intelligence, logistics, individual and team training, deployment training, staff experience.” The report concluded, however, that other forces suffer atrophy of “technical skills that are not employed in the operation and maneuver skills that require close coordination and integration.” Among those adversely affected, it cited the examples of forces designed to fire artillery, air defense missiles, or Tube-launched, Optically tracked, Wire-guided (TOW) missiles.

The report stated more generally that ground combat units were the “most adversely affected” and that, of these, “mechanized infantry, armored units, and units that are heavily equipment dependent” suffer the most severe combat skill erosion, particularly when they deploy without their equipment:

For example, a mechanized infantry unit from the 3rd Infantry Division in Europe experienced significant combat skill degradation during its 6-month deployment to Operation Able Sentry in 1994. Most of the required tasks were different from the unit’s war-fighting tasks. For example, the major task in Macedonia was to observe and report. However, the unit’s combat tasks included breaching an obstacle, attacking, defending, and supporting by fire. The unit deployed without its primary tactical vehicle, the Bradley Fighting Vehicle, and did not have access to a Bradley simulator while in Macedonia (citing 3rd Infantry Division official who said deployment of a simulator would have caused a divisionwide shortage of simulators). Furthermore, U.N. guidelines prohibited the unit from engaging in maneuver or other collective training in Macedonia. Lack of training in gunnery

and maneuver skills resulted in degraded combat capabilities. Upon redeployment, the unit received the lowest score in its divisionwide Bradley qualification test. With 3 months of training, the unit increased its readiness ranking to satisfactory.²⁰⁶

The report also cautioned that “each peace operation differs in terms of its effect on a unit’s combat capability,” noting that “[s]ome operations provide excellent experience that can improve the ability of various types of military units to operate in combat scenarios; others may benefit only certain types of units.”²⁰⁷

While the anecdote about the “degraded combat capabilities” of the peacekeeping battalion in Macedonia echoes traditional thinking about readiness, the GAO report’s findings also suggest a more complicated picture. The distinction between types of units expressly recognizes the possibility that there are classes of units (and skills valuable in combat) that can benefit from peace operations. The distinction between types of peace operations acknowledges that factors pertaining to materiel will not be the dominant influence on combat readiness if the peace operation in question resembles combat and requires use of identical weapons and equipment. New distinctions such as these help explain findings that are anomalous within the older paradigm and lay important groundwork for an alternative.

²⁰⁶ Ibid. The report also generally substantiated the return to readiness period established in the CALL study. See *ibid.*: “Army commanders generally estimate a range of 3 to 6 months to fully restore a unit’s war-fighting readiness after a peace operation.”

²⁰⁷ Ibid.

Military Officers and the Importance of Training Opportunities

The Army's professional ranks have produced an impressive number of papers on peace operations and readiness.²⁰⁸ These works are frequently nuanced in their discussions of Army training doctrine and techniques, attentive to approaches used by military professionals in other armed forces, and specific in their recommendations. This section surveys three representative papers.

John Abizaid and John Wood, both Colonels while conducting their research, examined the cost of peace operations in training terms. The resulting 1994 article,

²⁰⁸ See, for example, Lieutenant Colonel Jerry D. Hatley, "The Effects Operations Other than War Has on the Readiness of the United States Army," (Carlisle Barracks, PA: Army War College diss., April 1996); Major Thomas F. Greco, "A Survey of Selected Peace Operations Doctrines, and the Utility of Current US Army Peace Operations Doctrine," (Fort Leavenworth, KS, Master of Military Arts and Sciences diss. June 1995); Major Robert J. Everson, "Light Infantry Vulnerabilities That Represent Strategic Vulnerability In Operations Other Than War," (Fort Leavenworth, KS: School of Advanced Military Studies Monograph, Dec. 1994); Major Michael J. Flynn, "Battle Focused Training for Peacekeeping Operations: A METL Adjustment for Infantry Battalions," (Fort Leavenworth, KS: School of Advanced Military Studies Monograph, Dec. 1996); Major Thomas S. James, Jr. "Big Tank Little Bridge: Is There a Position on the Peace Operations Team for Heavy Armor?" (Fort Leavenworth, KS: School of Advanced Military Studies Monograph, Dec. 1996); Major Daniel J. Schuster, USMC. "Peacekeeping, Peace Enforcement, and the Operational Art," (Fort Leavenworth, KS: School of Advanced Military Studies Monograph, May 1995); Major Michael F. Beech, "Quasi-War: Training Infantry Small Units for Operations Other than War," (Fort Leavenworth, KS :School of Advanced Military Studies Monograph, Dec. 1995); Major Maurice L. Todd, "Army Tactical Requirements for Peace Support Operations," (Fort Leavenworth, KS: School of Advanced Military Studies Monograph, 1994).

“Preparing for Peacekeeping: Military Training and the Peacekeeping Environment,”²⁰⁹ contains findings based on personal experiences in a variety of operations on those of experienced officers in the British, Swedish, and German armies. The principal conclusion is that peace operations occur in a distinct environment that requires dedicated attention in training:

Peacekeeping is less a specific type of military mission and more an operation conducted in a unique environment. It is an environment just like mountain, jungle or desert, that leaders must understand and train for. This environment can be characterized as austere, disordered, dangerous, extremely close to local populations, and politically charged.²¹⁰

The training approach appropriate for such an environment, Abizaid and Wood maintain, is no different from that employed to ready soldiers and units for other demanding environments. The authors also find that “proficiency in warfighting, in both basic soldiering and functional specialties, underlies success in peacekeeping”²¹¹ and that “necesssary changes can be taught as refinement to operations, expansion of basic skills and enhancement of fundamental procedures in a relatively short period before deployment.”²¹²

Abizaid and Wood recommend several training techniques to prepare soldiers, units, and staffs for peace operations. Soldier training should stress force protection,

²⁰⁹ Colonel John P. Abizaid and Colonel John R. Wood, “Preparing for Peacekeeping: Military Training and the Peacekeeping Environment,” *Special Warfare* PB 80-94-2 (April 1994): 14-20.

²¹⁰ Ibid., 14-15.

²¹¹ Ibid., 15.

²¹² Ibid.

intelligence collection and use, use of force, regional awareness, along with common tactical tasks. Unit training should include the building, manning, and operating of checkpoints, techniques of mounted movement, and patrolling. Staff training should emphasize special planning for civil affairs, counterintelligence, and psychological operations and should test coordination with joint and coalition forces as well as with diverse civilian governmental and nongovernmental agencies and organizations. The need for distinct training translates into resources as well as time: “[l]eaders must simply recognize that there is a cost in additional resources to prepared soldiers for success in this unique environment.”²¹³

In a 1995 thesis for the School of Advanced Military Studies, Major Robert Botters examined two questions that remain implicit in the Abizaid and Wood paper. If there is a cost associated with training combat ready soldiers for peace operations, is there also a cost associated with retraining those same soldiers for combat? If so, can this cost be met while the unit is participating in the peace operation? The thesis—entitled *The Proliferation of Peace Operations and U.S. Army Tactical Proficiency: Will the Army Remain a Combat Ready Force?*²¹⁴—reviews and applies many traditional Army training concepts, including that of the mission essential task, discussed above in connection with the mechanical paradigm of readiness. He defines a “core competency” as a mission

²¹³ Ibid., 20.

²¹⁴ Major Robert J. Botters, “The Proliferation of Peace Operations and U.S. Army Tactical Proficiency: Will the Army Remain a Combat Ready Force?,” (Fort Leavenworth, KS: School of Advanced Military Studies Monograph, Dec. 1995).

essential task and analyzes United States experiences in Somalia as well as Canadian experiences in various peace operations and British experiences in Northern Ireland and the former Yugoslavia.

Botters concludes that participation in peace operations can adversely affect the warfighting skills of tactical units.²¹⁵ For instance, he finds that although participation in Operation Restore Hope in Somalia did not adversely affect the warfighting skills of tactical units in the 10th Mountain Division, this is attributable to the fact that the division deployed in its traditional task organization and to the nature of the Somalia operation, which allowed the division to “conduct[] missions that were derived from mission essential task lists.”²¹⁶ When these two factors are not present, the impact could be significant. Botters adds that “evidence suggests units trained and organized for combat operations can maintain core competencies in warfighting skills while participating in peace operations, if provided adequate resources for training perishable collective warfighting skills.”²¹⁷

In a collaborative article for a newsletter published by CALL in late 1996, two captains and two sergeants reported their findings on how such perishable skills could be maintained during the Bosnia peace operation. The article, *Maintaining Warfighting Skills While Keeping the Peace in Bosnia*,²¹⁸ favorably reviewed the training strategy

²¹⁵ Ibid., 41-43.

²¹⁶ Ibid., 38-40.

²¹⁷ Ibid., 41.

²¹⁸ Captain Robert Murphy, Captain Fred Johnson, Sergeant First Class Barry Tankersley and Staff Sergeant John Shaw, “Maintaining Warfighting Skills While

adopted and implemented by the 1st Armored Division, the major United States commitment of ground forces to the Implementation Force in the former Yugoslavia. The authors noted that the Division faced severe obstacles to the conduct of realistic training. These included the immediate mission of implementing the General Framework Agreement for Peace, the limited physical area in which to train, the decentralized nature of the operations, and the unavailability of training assets and aids.

Yet commanders and trainers developed ingenious techniques to overcome these obstacles. One example was that used by a tank platoon operating a checkpoint in the Zone of Separation. Despite having little available terrain and no training devices,

it was able to conduct gunnery training by building a mini-range out of on-hand materials. The master gunner fabricated targets out of MRE boxes and affixed them to a 2x4. A string was added to raise the target and a rubber band attached to the back allowed the target to fall. Later, reverse polarity thermal paper was added to the target to provide thermal training. To add a moving target scenario, a track was designed from a 4x4 and 1x4s were nailed together to fit over the track. A string was added to provide movement.²¹⁹

The Army also made large investments in facilities to assist the effort to train marksmanship and gunnery, “[p]robably the most degradable of all skills in any unit”²²⁰ In Glamoc, Bosnia, it built an artillery and attack helicopter range, and as mentioned above in relation to Task Force Myth, in Taborfalva, Hungary, it constructed and manned a tank and Bradley gunnery range, along with small unit maneuver live-fire

Keeping the Peace in Bosnia,” *Center for Army Lessons Learned News From the Front* (Nov.-Dec. 1996): 1-10.

²¹⁹ Ibid., 7.

²²⁰ Ibid., 5.

ranges. Although not quite equal to the training available at the Combat Training Centers, these in-theater facilities combined with leader ingenuity to create a formidable program for the maintenance of warfighting skills.

The tactics, techniques, and procedures recommended by military professionals are quintessential attempts to conduct “normal military science” within the existing paradigm. The goal of these writings is almost invariably functional, specific, and practical—as it should be. As Kuhn recognized, it is the willingness not to challenge first principles that enables meaningful progress and accumulation of knowledge to occur within a paradigm commanding respect. Here, the mechanical paradigm of readiness—reflected in the Unit Status Reporting system, the Combat Training Center program, and a training system built around Mission Essential Task Lists—is never intentionally challenged. Instead, methods are explored toward the end of maximizing readiness as traditionally conceived.

Yet exploration of these methods also inevitably yields anomalies for the older paradigm. One of these is the oft-noted commonality between many warfighting skills and many peace operations skills. Another is the frequent conclusion that resources must be dedicated to training, rather than merely to numbers of men and materiel. Still another is the recurring pattern of examples in which individual initiative and ingenuity have been indispensable to effective training.

RAND and the MRC Capability Question

Whereas the research reviewed thus far principally examines the impact of peace operations on particular units and skills, another class of studies focuses upon the impact across the total force. The *National Security Strategy* states that the United States, “in concert with regional allies, must remain able to deter credibly and defeat large-scale, cross-border aggression in two distant theaters in overlapping time frames.”²²¹ This requirement to “fight[]and win[] major theater wars”²²² replaces a similar provision in previous recent versions of the Strategy that required the military to fight and win “two nearly simultaneous major regional conflicts.”²²³ The capability to fight and win such a conflict—now abbreviated “MTW” and formerly “MRC”—forms the point of departure for evaluating the impact of a particular peace operation.

How does the conduct of one or more peace operations affect the Army’s MRC capability? This was the question addressed by the RAND Arroyo Center in a 1997 study entitled *Army Forces for Operations Other Than War*.²²⁴ The study analyzed peace

²²¹ President of the United States, *A National Security Strategy for a New Century*, (Washington, D.C.: White House, 1997), 12.

²²² Ibid.

²²³ President of the United States, *A National Security Strategy of Engagement and Enlargement*, (Washington, D.C.: White House, 1995).

²²⁴ See Ronald E. Sortor, *Army Forces for Operations Other Than War* (Washington, D.C.: RAND Arroyo Center, 1997, which frames the precise question as follows: “How does the conduct of operations such as peace enforcement, humanitarian assistance, peacekeeping, and lesser regional contingencies influence the readiness and availability of Army forces to deploy to an MRC?” The Sortor study built upon previous work by RAND. See, for example, Ronald E. Sortor, *Army Active/Reserve Mix: Force Planning for Major Regional Contingencies*, (Santa Monica, CA: RAND, 1993). The

operations performed by the Army since 1975, as well as plans for future operations. From this analysis, it determined a likely approximate force requirement for peace operations in terms of unit types, numbers of units, and duration of deployment. Next, it added this force requirement to that needed to fight and win a MRC. Then, it compared this overall force requirement with the Army force structure that emerged from the Bottom Up Review that was completed in September 1993.²²⁵

The RAND study actually experimented with three different MRC scenarios. The first involved two separate, nonsimultaneous MRCs, each requiring four to five divisions. The second involved one MRC requiring reinforcement up to a total of eight divisions. The third involved two nearly simultaneous MRCs requiring a total of eight to ten divisions.

The Somalia deployment was used to approximate the peace operations force requirement, and some consideration was given to effects of adding other small operations other than war to the peace operations load.²²⁶ The study also assumed various scenarios of reserve mobilization, generally assuming that mobilization would occur in response to the MRC, but that only selected reservists would be called to active duty for the peace operation alone. Incorporating the CALL return-to-readiness timeline

RAND Arroyo Center is a federally funded research and development center sponsored by the United States Army.

²²⁵ The Bottom Up Review led to an Army force structure of eighteen divisions (ten active and eight reserve) with 1,070,000 personnel (495,000 active and 575,000 reserve). See Sortor, *Army Forces for Operations Other Than War*, 8.

²²⁶ For instance, the study considered operations in southern Florida, Rwanda, Panama, MFO Sinai, Macedonia, and Guantanamo Bay. See *ibid.*, 56.

data, the study also took into consideration the time required for units first to prepare and deploy for a peace operation and then to regain combat-ready status after their return. It also considered the effects of rotation and tour length policies on the availability of forces. Without conducting formal analysis, the study also considered the impact cross-leveling of personnel and equipment could have upon non-deployed units as well as the effects of different authorized levels of organization (ALO) for active and reserve units.

The study concluded that the Army had an adequate number of most types of units to perform both a limited number of peace operations and win in the various MRC scenarios. It discovered shortages, however, in support units like petroleum supply companies, water purification teams, maintenance teams, terminal operations teams and companies, and light-medium truck companies, units that typically deploy to peace operations but are in short supply in the active component. The study briefly considered various approaches to eliminating the shortfalls, including changes in participation and roles of reserve component forces.²²⁷

²²⁷ For a popularized rendition of "MRC capability" problem, see David Hackworth, *Hazardous Duty* (New York: William Morrow and Company, 1996), 282-83: "It worries me when I see Bosnia soaking up 10 percent of the U.S. Army's total combat and support power. It worries me even more when I see how overextended we are in a world where we have made commitments to so many places. There will be somewhere between fifteen and twenty battalions in Bosnia. We have had up to twenty battalions in Haiti. We have a battalion out in the Sinai on another peacekeeping mission. We have battalions in Kuwait and Macedonia and the equivalent in Green Berets with the Kurds in northern Iraq and troops outposted in dozens of other hot spots. We are talking about putting others up on the Golan Heights. The problem is even worse when you consider the multiplying factor of these deployments. Consider our battalion in Macedonia, for example. We don't just have a single battalion tied up. We also have a battalion getting ready to go to Macedonia and a battalion that is retraining to become hard-edged war fighters again after a tour there. It's not that you lose only one battalion that is deployed,

Methodologies similar to that used by RAND formed the basis of several studies completed by the United States Army Concepts Analysis Agency, the specific findings of which remain classified.²²⁸ Two GAO Reports employing less formal analysis concluded, consistent with the RAND study, that key support units represented the largest risk to MRC capability. The GAO reports also recited data reflecting the impact of deployments on peace operations upon "PERSTEMPO," the number of days individual soldiers and units are deployed in a given period of time.²²⁹ All of the studies were generated as the result of Army or government interest in the continuing size and

but you lose the battalion that just came out of there and you lose the battalion that's preparing to go. So for every battalion on these scattered missions, you can multiply the effect by three."

²²⁸ See United States Army Concepts Analysis Agency, *Assessment of Long-Term Peacekeeping (ALP)* (Bethesda, MD: CAA-MR-94-2, 18 Aug. 1993); United States Army Concepts Analysis Agency, *Assessment of Long-Term Peacekeeping—Personnel Turbulence (ALP-PT)* (Bethesda, MD: CAA-MR-94-16, 7 Oct. 1993); United States Army Concepts Analysis Agency, *Korea, Bosnia, Haiti, Rwanda (KOBOSH) Quick Reaction Analysis* (Bethesda, MD: CAA-MR-94-35, Aug. 1994); United States Army Concepts Analysis Agency, *Korea, Bosnia, Haiti, Rwanda, Version II (KOBOSH II) Quick Reaction Analysis* (Bethesda, MD: CAA-MR-94-53, Nov. 1994); United States Army Concepts Analysis Agency, *Korea, Bosnia, Southwest Asia, Version III (KOBOSH III)* (Bethesda, MD: CAA-MR-xx-xx, Dec. 1997); United States Army Concepts Analysis Agency, *Matching Army Requirements to Yearly Resources (MARTYR)* (Bethesda, MD: CAA-MR-97-48, Aug. 1997). The United States Army Concepts Analysis Agency is an analysis organization that supports Headquarters, Department of the Army and major Army commands. See United States Army Concepts Analysis Agency, "CAA Strategic Plan," (30 Dec. 1997) (copy in possession of author).

²²⁹ See U.S. General Accounting Office, *Report Number NSIAD-96-105, Military Readiness: A Clear Policy is Needed to Guide Management of Frequently Deployed Units* (Washington, D.C.: GAO, April 1996); U.S. General Accounting Office, *Report Number NSIAD-95-51, Heavy Use of Key Capabilities May Affect Response to Regional Conflicts* (Washington, D.C.: GAO, Mar. 8, 1995).

structure of the peacetime Army. More studies using the RAND methodology can be expected as proposed force structures emerge from ongoing policy debates.²³⁰

The conclusions of the RAND and other MRC capability studies can be illustrated within the hypothetical battle of Chagang-do. That battle, while triggered by Task Force Myth's deployment to a peace operation in North Korea, is part of an MTW. According to these studies, although there may be combat units available to deploy against the

²³⁰ The most recent General Accounting Office report points to a particularly acute shortage in infantrymen for later deploying divisions:

We found significant personnel shortfalls in all the later-deploying divisions. For example:

- At the 10th Infantry Division, only 138 of 162 infantry squads were fully or minimally filled, and 36 of the filled squads were unqualified.
- At the 2nd and 3rd brigades of the 25th Infantry Division, 52 of 162 infantry squads were minimally filled or had no personnel assigned.
- At the 1st Brigade of the 1st Infantry Division, only 56 percent of the authorized infantry soldiers for its Bradley Fighting Vehicles were assigned, and in the 2nd Brigade, 21 of 48 infantry squads had no personnel assigned.
- At the 3rd Brigade of the 1st Armored Division, only 16 of 116 M1A1 tanks had full crews and were qualified, and in one of the Brigade's two armor battalions, 14 of 58 tanks had no crewmembers assigned because the personnel were deployed to Bosnia. In addition, at the Division's engineer brigade in Germany, 11 of 24 bridge teams had no personnel assigned.
- At the 4th Infantry Division, 13 of 54 squads in the engineer brigade had no personnel assigned or had fewer personnel assigned than required.

General Accounting Office, *Observations on Personnel Readiness in Later Deploying Army Divisions*, 6.

attacking Chinese, the continuing peace operations in Bosnia, the Sinai, and whatever other commitments exist in the year 2000 threaten to deprive Task Force Myth of crucial combat service support. They also threaten to guarantee that Task Force Myth will arrive tired and strung out from six previous months of deployment.

Such admittedly quite useful studies, more than any other research on the impact of peace operations, epitomize the mechanical paradigm of readiness. Sharing a direct lineage to the famous Lanchester models of warfare,²³¹ these studies seek to provide a scientific basis for decisions within the control of senior uniformed and civilian leaders. They stress quantitative methods and formal modeling, techniques that while present in the services since the end of the Great War, acquired their modern institutions since World War II. These techniques are often identified with "operations research and systems analysis" and the reforms to military decision-making effected by Secretary of Defense Robert McNamara.²³² This is Ludendorff's rationalization of warfare taken to a logical extreme.

Yet even in these studies, strains on the mechanical paradigm are discernible. For instance, the RAND study speculates that "repeated and frequent deployments, or even occasional deployments to unpopular operations, may be expected to affect morale and reduce retention."²³³ It proposes a future model in which a desired minimum time

²³¹ See, for example, James G. Taylor, *Lanchester Models of Warfare*, vol. 1 (Monterey, CA: Naval Postgraduate School, Operations Research Society of America, March 1983), 1-83.

²³² See Swain, "Filling the Void: The Operational Art and the U.S. Army," 151.

²³³ Sortor 1997, *Army Forces for Operations Other Than War*, 45.

between deployments be incorporated to account for these morale and retention factors.²³⁴

One of the GAO reports, while stating that peace operations “can impair unit and personnel combat training and equipment readiness and divert funds from planned operations and maintenance activities”²³⁵ also recognizes that “such deployments provide excellent experience in the tasks essential to wartime proficiency for light infantry, supply, or other support units.”²³⁶ In this crude way, quantitative models begin to accommodate anomalies resulting from human factors.

Academic Surveys and Soldier Attitudes Toward Peace Operations

One human factor absent from operations research models is the attitude the individual soldier brings to the peace operation. If that attitude is wholly negative, then the peace operation could be expected to command a higher cost in terms of readiness for combat operations. Also, a negative attitude by the participating soldier might reflect underlying inconsistencies between duties during peace operations and duties in war.

Continuing a tradition begun by Morris Janowitz in 1960²³⁷ and furthered by Charles Moskos in 1976,²³⁸ academic surveys in the 1990s have explored the relationship between peace operations and the warrior mindset. The most recent of these was conducted by Laura L. Miller, a University of California sociologist who recorded soldier

²³⁴ See *ibid.*

²³⁵ General Accounting Office, *Frequently Deployed Units*, 1.

²³⁶ *Ibid.*

²³⁷ Janowitz, *The Professional Soldier*.

²³⁸ Charles Moskos, *Peace Soldiers* (Chicago: University of Chicago Press, 1976).

perceptions of peace operations in a 1997 article entitled "Do Soldiers Hate Peacekeeping? The Case of Preventive Diplomacy Operations in Macedonia."²³⁹ At the title suggests, the surveyed population consisted of a sample of United States Army participants in the peacekeeping mission in Macedonia in 1994. That mission, Operation Able Sentry, involves the policing of the Macedonia-Serbian border by a United Nations force dedicated to preventing the spread of the conflict that engulfed the former Yugoslavia. Miller conducted the research with the support of then Chief of Staff Gordon Sullivan.

One portion of Miller's survey sought the soldiers' answer to the question "Does Serving in Peacekeeping Operations Improve or Detract from Soldier's Abilities to Conduct Combat Operations?" Citing earlier research in Macedonia, Miller recognized that this question is an important one from the point of view of senior leaders:

This question was foremost in the senior leaders' minds. Those directly in command of troops were especially concerned about any possible negative effects of serving in Operation Able Sentry. According to Bartone and associates' research on the first rotation of U.S. soldiers out of Macedonia, "Soldiers are split on whether U.S. infantry units should be used to perform UN peacekeeping missions. They claim that they can accomplish any mission handed to them, but are worried about maintaining warfighting or 'peacemaking' skills."²⁴⁰

Miller's own research revealed that nearly equal proportions of survey respondents (i.e., soldiers rather than leaders) thought the mission made them better prepared for combat

²³⁹ Laura L. Miller, "Do Soldiers Hate Peacekeeping? The Case of Preventive Diplomacy Operations in Macedonia," *Armed Forces and Society* 23, no. 3. (Spring 1997): 415-50.

²⁴⁰ *Ibid.*, 436.

(22 percent) as thought it made them less well prepared (24 percent). She also reported that roughly half of the troops surveyed thought the deployment to Macedonia would have little effect on their ability to carry out a combat mission.

In a section entitled "Does Peacekeeping Improve Soldier Skills?" Miller observed that

[b]oth leaders and common soldiers remarked that peacekeeping deployments improve soldier skills at the small-unit level and develop leadership skill among NCOs. Each outpost was operated entirely by an NCO living with his men, and was supervised by senior NCOs who made regular visits to the OPs. Teams worked together to manage living arrangements, patrols, and observation duties. One NCO wrote that improvement occurred "at the squad ordnance and fire team level, but at the battalion and task force level, not much." A higher ranking NCO commented, It will not so much help me but I feel it will help [junior enlisted soldiers and junior NCOs]."²⁴¹

The Miller study also noted that living under harsh conditions, in freezing winter or summer heat, was perceived by some as useful experience for soldiers. One soldier commented that "[a]ny mission is a million times better than training," a view shared by others who felt that the benefits of a real-life deployment outweighed the temporary deterioration of some combat skills.²⁴²

²⁴¹ Ibid., 438. I am indebted to Professor Miller for providing me copies of additional tables containing unpublished data.

²⁴² Ibid., 437-39.

In a section entitled "Does Peacekeeping Detract from Soldier Skills?," the study generally agreed with findings stated in the GAO report and the CALL study. It found that

In the squad mission that characterizes Able Sentry, company maneuver skills are eroded somewhat. Moreover, soldiers may lose some skills in individual and (especially) crew-served weapons. . . .

Some combat soldiers believed they would have a different mindset at the end of their mission: "I think it has a negative effect on combat skills. We might slip in combat and do a peacekeeping move."²⁴³

Miller further found that the impact of peacekeeping deployments on readiness varied with occupational specialty, rank, and level of training, a slightly different set of factors than that identified by the GAO report (which identified "type of peace operation, the type of unit participating, the length of participation, and in-theater training opportunities" and which analyzed whether a unit had deployed with its equipment). She also reported that soldiers tended to think that restoration of combat skills would take place in shorter than the six month figure cited by some leaders.

Such survey data are vulnerable to the criticism that junior soldiers do not know what they do not know: those who have not been required to master combined arms

²⁴³ Ibid. 439. The negative responses obtained by Professor Miller from some soldiers in Macedonia echo a portion of survey responses obtained by the Center of Army Lessons Learned regarding operations in the Sinai, also the scene of a traditional peacekeeping mission characterized by restrictive rules of engagement, constraints on deployable weaponry, and a posture of strict neutrality. See, for example, Unnamed Major, Battalion S-3, deployed in the Sinai in 1994, surveyed by Major Paul M. Rivette, Center for Army Lessons Learned, in December 1995 for *Special Study*, survey form on file with CALL: "We were degraded on every one of our METL tasks. We had to 'train down' to perform the Sinai mission, not 'train up' for it."

training at a Combat Training Center or in war could be expected to minimize shortcomings in combat skills that have never been exposed. Still, these data present a challenge to the mechanical paradigm that cannot be sensibly dismissed. If the attitudes of young combat soldiers are readily adaptable to strict peacekeeping, a type of mission that is arguably more distant from combat than any other type of peace operation, what becomes of the view that peace operations and war demand incompatible mindsets?²⁴⁴

²⁴⁴ For related research into soldier attitudes, mindsets, and kindred issues pertaining to peace operations, see generally Jesse J. Harris and David R. Segal, "Observations from the Sinai: Boredom—A Peacekeeping Irritant," (Fort Bragg, NC: United States Army Medical Research Unit, 1984); Mark Paris and Joseph Rothberg, "A Factor-analytic Study of Deployment Attitudes of the Sinai Peacekeeping Force," (Washington, D.C.: Department of Military Psychiatry, Walter Reed Army Institute of Research, 1984); United States Army Medical Research Unit, "The Stress of Transitions: Illness Reports and the Health of the United States Battalion During the Initial Sinai MFO Deployment," (Fort Bragg, NC: USAMRU, 1984); David R. Segal and Katherine Gravino, "Peacekeeping as a Military Mission," in *The Hundred Percent Challenge*, ed. Charles D. Smith (Cabin John: Seven Locks Press, 1985); Jesse J. Harris and David R. Segal, "Observations from the Sinai: the Boredom Factor," *Armed Forces and Society* (Winter 1985): 235; David R. Segal, Jesse J. Harris, Joseph M. Rothberg, and David H. Marlowe, "Deterrence, Peacekeeping and Combat Orientation in the U.S. Army," (Washington, D.C.: Department of Military Psychiatry, Walter Reed Institute of Research, 1987); Mark A. Vaitkus and Paul T. Bartone, "Attitudes Toward Peacekeeping and Peacemaking Among U.S. Infantry Soldiers Deployed to the Former Yugoslavia of Macedonia," (Germany: USAMRU, 1994); Joan Harman, "Peacekeeping in Somalia," Research Report 1663 (Alexandria, VA: U.S. Army Research Institute, July 1994); Paul T. Bartone, Mark A. Vaitkus, and Amy B. Adler, "Psychological Issues in Peacekeeping Contingency Operations," (Germany: USAMRU, August 1994); Ernest G. Cunningham, "Peacekeeping and U.N. Operational Control: A Study of Their Effect on Unit Cohesion," (Monterey, CA: MA in National Security Affairs diss., March 1995); Ronald R. Halverson, Paul D. Bliese, Robert E. Moore, and Carl A. Castro, "Psychological Well-Being and Physical Health Symptoms of Soldiers Deployed for Operation Uphold Democracy: A Summary of Human Dimensions Research in Haiti," (Washington, D.C.: Walter Reed Army Institute of Research, 17 May 1995).

Miller's findings are broadly consistent with survey data collected by Army Major Robert Young in early 1997 from forty Command and General Staff College students who had previously participated in operations other than war.²⁴⁵ The stated research goal of the Young study was "to understand how participation in [operations other than war] has affected officers' attitudes, and the implications of these experiences for the future."²⁴⁶ Young reported that sixty-five percent of these officers (twenty-six in number) agreed or strongly agreed with the statement "The skills/tactics learned/employed during OOTW missions are useful to warfighting."²⁴⁷ Eighty-three percent (thirty-three in number) responded that their participation in such missions had made no difference in their willingness to employ lethal force in future combat operations.²⁴⁸ Ninety-five percent (thirty-eight in number) agreed or strongly agreed with the statement "A soldier who is well-trained in military skills still requires additional skills for peacekeeping service."²⁴⁹

²⁴⁵ Major Robert G. Young, "The Impact of Operations Other than War on the Midgrade (O-3/4) Army Officer," (Fort Leavenworth, KS, Master of Military Arts and Sciences diss. June 1997). Young actually received survey responses from 113 fellow officers in his Command and General Staff College class, only 40 of whom had experienced operations other than war. Ibid. 72-73. Peace operations in the Sinai, Somalia, Haiti, and Bosnia accounted for 30 of the 40 officers' experiences. Ibid., 88. Because Young found that data on the attitudes of participants and non-participants were very similar, see *ibid.*, 101, the treatment here is confined to the responses submitted by the 40 participants.

²⁴⁶ Ibid., iii.

²⁴⁷ Ibid., 101.

²⁴⁸ Ibid.

²⁴⁹ Ibid.

Yet these findings appear ancillary to Young's true research aim. Young warns at the outset of his paper that the Army's transformation as a result of recent OOTW missions "is potentially dangerous" and that "[t]he warrior ethos and associated skills required for warfighting may not be compatible with this OOTW role."²⁵⁰ Young also approvingly quotes Michael New and sympathetically reviews New's legal troubles without any reference to the constitutional underpinnings for peacekeeping summarized in chapter 2 above.²⁵¹ Not surprisingly, Young places particular emphasis on his finding that seventy percent of the officers (twenty-eight in number) agreed or strongly agreed with the statement "I would like to see less OOTW deployments for the U.S. Army."²⁵²

Continuing Vitality

The anomalies confronting the mechanical paradigm in all of the research reviewed in this chapter do not alter that fact that the paradigm continues to explain certain basic questions about readiness. Herein lies its formidable continuing vitality. As Kuhn illustrated in his account of the emergence of Copernican (sun-centered) astronomy, the Ptolemaic (earth-centered) system was "admirably successful in predicting the changing positions of both stars and planets."²⁵³ Even as newly collected observations generated minor discrepancies with the Ptolemaic paradigm's predictions, the discrepancies could be eliminated by making some particular adjustment in the

²⁵⁰ Ibid., 2.

²⁵¹ Ibid., 20-21.

²⁵² Ibid., iii.

²⁵³ Kuhn, *Structure of Scientific Revolutions*, 68.

paradigm's system of compounded circles. Because it addressed basic questions well—Kuhn noted in 1962 that it was still widely used as an engineering approximation—Ptolemaic astronomy survived centuries of such adjustments before it was perceived as cumbersome and inaccurate.

Despite the increasing body of observations suggesting that the combat readiness of an Army depends upon more than numbers of weapons and units and technically competent soldiers, the mechanical paradigm persists in addressing these factors with compelling logic. Task Force Myth is certainly less combat ready if five of its thirty Bradleys are inoperable because of wear and tear from patrolling the Zone of Separation in Bosnia, or if thirty percent of its tank commander positions are not filled, or if its mortar crews have not fired and adjusted live rounds in the past 12 months. It is certainly less ready for the battle of Chagang-do if an Army-wide shortage in port terminal specialists has prevented artillery rounds and anti-armor missiles from reaching the weapons systems in time to repel the Chinese attack. The Army is certainly less ready for that battle if other worldwide commitments prevent it from positioning additional battalions in Chagang-do.

An older paradigm gives way only when an alternative emerges to replace it.²⁵⁴ Ptolemaic astronomy lost few adherents before Copernicus, postulating that the planets revolved around the sun, predicted their positions in the sky with greater ease and accuracy. Similarly, the mechanical paradigm can be expected to hold sway so long as it

²⁵⁴ See Kuhn, *Structure of Scientific Revolutions*, 84.

—complete with minor modern adjustments—faces no coherent competitor. The description of a more persuasive paradigm of readiness is thus necessary before the prevailing view of peace operations as distractions, grounded as that view is in the mechanical paradigm, can change. Such a description is the project of chapter 4.

CHAPTER 4

TOWARD AN INTEGRATING PARADIGM OF READINESS

The previous chapter diagnosed why the prevailing view of peace operations persists in spite of its problems. To recap, the prevailing view is that peace operations are, at best, merely the small change of soldiering. As such, they are distractions from the Army's primary mission of preparing for the next real war. This remains the prevailing view despite the fact that peace operations and other "nontraditional" operations actually recur with great regularity, despite evidence that friction is their frequent companion, and despite indications that they may cultivate quite traditional and functional soldierly and unit virtues. The theory forwarded here is that a mechanical paradigm—which has discernible roots in the industrialization of warfare that occurred before and during the first World War—continues to dominate modern conceptions of readiness. Adherents of the mechanical paradigm employ the prevailing view of peace operations to dismiss anomalies and to resist alternative paradigms suggested by those anomalies.

This chapter proposes an alternative, "integrating" paradigm of readiness. The mechanical paradigm essentially defines readiness in terms of quantities—of advanced weapons and equipment, and of soldiers trained to service those weapons and equipment. The integrating paradigm, by contrast, defines readiness in terms of both quantity and quality. It equates readiness with the demonstrated functioning of an entire organization, such as Task Force Myth, under conditions that approximate those that the organization would confront in war. Without renouncing the material factors that are central to the

mechanical paradigm, the integrating paradigm incorporates additional factors that seem to bear upon readiness, such as morale, doctrine, and leader development.

The integrating paradigm of readiness sets out to make the mechanical paradigm “whole” by “adding or bringing together” different component factors.²⁵⁵ It exploits the insight that the readiness of an organization comprising humans is more than the mere sum of factors mechanically captured in a Unit Status Report. It also maintains the

²⁵⁵ Webster's New World Dictionary of the English Language, 1978 ed., s.v. “integrate.” The term “integrating” correctly suggests the notion that the mechanical paradigm is incomplete and thereby incapable of resolving the anomalies recounted in chapter 3. Yet the term also avoids the negative connotations associated with “holistic” methodology. Holism fell in to disrepute in 1957, when social scientist Karl Popper's trenchant criticism of the approach first appeared. See Karl R. Popper, *The Poverty of Historicism* (London: Routledge & Kegan Paul, Ltd., 1957), 17, 76-92: “[Most historicists argue] that sociology, like all ‘biological’ sciences, i.e. all sciences that deal with living objects, should not proceed in an atomistic, but in what is now called a ‘holistic’ manner. For the objects of sociology, social groups, must never be regarded as mere aggregates of persons. The social group is *more* than the mere sum total of the merely personal relationships existing at any moment between any of its members. This is readily seen even in a simple group consisting of three members. A group founded by A and B will be different in character from a group consisting of the same members but founded by B and C. This may illustrate what is meant by saying that a group has a *history* of its own, and that its structure depends to a great extent on its history” See also Charles Taylor, “Atomism,” in *Powers, Possessions and Freedom: Essays in Honour of C.B. MacPherson*, ed. Alkis Kantos (Toronto: University of Toronto Press, 1979), 39-61. Even as he acknowledged that organizations are more than the mere sum of their parts—a tenet to which holists subscribe—Popper rejected holism as “an impossible method.” Popper, *Poverty of Historicism*, 79. He identified the holist's penchant for studying “the totality of all the properties or aspects of a thing, and especially the relations holding between its constituent parts” Ibid., 76. He then demonstrated, with penetrating logic, that even if the holist wishes to study a thing as a totality, he is bound nevertheless to analyze, to select a certain single aspect of it at a time (even if the aspect selected is the thing's overarching structure). One cannot describe both the structure of a thing and all of its contents simultaneously. All description, Popper wrote, “is necessarily selective.” Ibid., 77.

insight, embedded in the mechanical paradigm, that quantity has a quality all of its own. Other things being equal (admittedly a rare situation), it is better to have more serviceable tanks, more personnel, and more training on mission essential tasks, than less.

The dimensions of readiness that are integrated by the new paradigm include several that traditionally have been perceived to be in tension with one another. The integrating paradigm defines linkages between human and material factors, between military art and military science, between the strategic and the tactical levels of war, and between the categories of war and operations other than war. These linkages, in turn, encourage a fresh view of whether peace operations truly erode the Army's ability to fight wars.

Integrating Human Factors

In the latter part of the 19th century, a French infantry officer named Ardant du Picq contributed to the readiness debate of his time by asserting the importance of human factors:

The art of war is subjected to many modifications by industrial and scientific progress. But one thing does not change, the heart of man. In the last analysis, success in battle is a matter of morale. In all matters which pertain to an army, organization, discipline and tactics, the human heart in the supreme moment of battle is the basic factor. It is rarely taken into account; and often strange errors are the result. Witness the carbine, an accurate and long range weapon, which has never given the service expected of it, because it was used mechanically without considering the human heart. We must consider it!²⁵⁶

²⁵⁶ Ardant du Picq. *Battle Studies*, trans Col. John N. Greely and Major Robert C. Cotton, in *Roots of Strategy, Book 2: 3 Military Classics* (Harrisburg, PA: Stackpole Books, 1991), 135.

Du Picq's view of what success in battle required was a studied view. He spent years ruminating upon his own combat experiences during the Crimean war, and he analyzed with care various historical documents that provided firsthand glimpses of major combat engagements experienced by his peers on the European continent.²⁵⁷

In 1869, seeking candid reflections on how soldiers behaved "[u]nder the pressure of danger, impelled by the instinct for self-preservation,"²⁵⁸ du Picq circulated a questionnaire to his fellow officers. Few responded to his pointed queries—some of which awkwardly implied that French officers might not be universally courageous under fire—but du Picq pressed on. He developed a perspective of combat that challenged convention, a perspective of the individual soldier, terrified and alone on the field of battle.²⁵⁹ After an exploding Prussian shell killed du Picq near Metz in 1870, his writings influenced a generation of French military leaders. That these leaders, among them Marshal Foch, dogmatically invoked the fallen commander of the 10th Infantry Regiment to suggest that readiness demanded *elan* and little else,²⁶⁰ does not diminish du Picq's achievement.

²⁵⁷ See, for example, Keegan, *Face of Battle*, 68-69.

²⁵⁸ Du Picq, *Battle Studies*, 129.

²⁵⁹ See Keegan, *Face of Battle*, 68-72.

²⁶⁰ Marshal Ferdinand Foch was eventually French Chief of Staff in World War I. For discussions of the French concept of *elan*. See, for example, *ibid.* 70: "Du Picq's ideas were, after his death, and in an exaggerated and misinterpreted form, adopted by the French army." See also Michael Howard, *War in European History* (New York: Oxford University Press, 1975), 106: "French military leaders, General Ferdinand Foch foremost among them, continued to believe that even the strongest defences could be carried by mass attacks under heroic leadership, so long as the offensive could build up a decisive superiority of fire. So they planned in 1914 to disrupt the German movements by taking

Careful dissection of the role of morale remains uncommon to this day, but military thinkers besides du Picq have suggested the importance of human factors. Contemplating why the same troops can be victorious in one instance and defeated in another, Marshal de Saxe wrote that “[f]ew men have accounted for it in a reasonable manner, for it lies in human hearts and one should search for it there,” and that “without a knowledge of the human heart, one is dependent upon the favor of fortune, which sometimes is very inconstant.”²⁶¹ Napoleon is said to have observed that in war the moral element is to all others as three is to one.²⁶² Jean de Bloch wrote prophetically that the challenges of army organization involve “[a]n isolated human being [who] moves cautiously about on a desolate plain studded with dead bodies, and without a sight or sound to cheer him to enthusiasm or to absorb his fear of death.”²⁶³ S.L.A. Marshall claimed that “[w]henver one surveys the forces of the battlefield, it is to see that fear is

the initiative with their own attacks—attacks in which bloody casualties were to be expected, but from which no strong-willed commander would shrink.” See also James B. Agnew, Clifton R. Franks, and William R. Griffiths, *The Great War* (West Point, NY: United States Military Academy, 1977), 25: “In the final analysis, they were entranced with the *elan* of their troops and felt that the actions of the enemy were of little account.” Evidence that du Picq’s ideas were contorted by the French army appears in his own work. See, for example, du Picq, *Battle Studies*, 154: “Do not then neglect destructive effort before using moral effect.”

²⁶¹ Maurice de Saxe, *My Reveries Upon the Art of War*, in *Roots of Strategy: The 5 Greatest Military Classics of Our Times*, ed. Thomas R. Phillips (Harrisburg, PA: Stackpole Books, 1995), 190-191.

²⁶² Frank H. Simonds, “Preface to du Picq’s *Battle Studies*,” in *Roots of Strategy, Book 2: 3 Military Classics* (Harrisburg, PA: Stackpole Books, 1991), 17.

²⁶³ Jean de Bloch, “Militarism in Politics, and Lord Roberts Army Reorganization Scheme,” *The Contemporary Review* 80 (December 1901): 761-793, reprinted in *Jean de Bloch: Selected Articles*, ed. Richard Swain (Fort Leavenworth: Combat Studies Institute, 1993), 135-79, 169.

general among men,” and proposed organization and training methods that could mitigate that fear.²⁶⁴ John Keegan observes that “what battles have in common is human: the behaviour of men struggling to reconcile their instinct for self-preservation, their sense of honour, and the achievement of some aim over which other men are ready to kill them.”²⁶⁵

Modern Acknowledgments of Human Factors

Of course, United States Army doctrine officially acknowledges the role of human factors. For example, *Field Manual 100-5, Operations*, the Army’s keystone doctrine, states that “warfare remains a test of the soldier’s will, courage, endurance, and skill”²⁶⁶ and devotes two pages near the end of the manual to “the human dimension.”²⁶⁷ *Field*

²⁶⁴ I use verb “claimed” advisedly because although Marshall’s reputation as an important commentator on the soldier’s world remains intact, his central assertions about soldier behavior in combat have been demonstrated fraudulent. See Roger J. Spiller, “S.L.A. Marshall and the Ratio of Fire,” *RUSI, Journal of the Royal United Services Institute for Defense Studies* 133 (Dec. 1988): 63-71.

²⁶⁵ Keegan, *Face of Battle*, 303. See also Robert F. Baumann, “Technology versus the Moral Element: Emerging Views in the Russian Officer Corps, 1870-1904,” in *New Perspectives in Modern Russian History*, ed. Robert McKean (New York: MacMillan Publishing Co., Inc. 1992), 43-64.

²⁶⁶ See, for example, U.S. Department of the Army, *Field Manual 100-5*, 1-2.

²⁶⁷ *Ibid.*, 14-1 to 14-2. For commentaries on the inclusion of this material on the human dimension in *Field Manual 100-5*, see generally John L. Romjue, *From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982*, TRADOC Historical Monograph Series (Fort Monroe, VA: Historical Office, U.S. Army Training and Doctrine Command, 1984), 54-55 (crediting Lieutenant General Richard E. Cavazos with turning the attention of doctrine writers to du Picq and Keegan) and Roger J. Spiller, “The Tenth Imperative,” *Military Review* 69, no. 4 (April 1989): 2-10 (offering suggestions on how to comply with *Field Manual 100-5*’s injunction to “understand the effects of battle on soldiers, units, and leaders”).

Manual 22-100, Leadership, the authoritative guide to Army leadership, proclaims that "the starting point for understanding of war is understanding of human nature."²⁶⁸ The present Chief of Staff of the Army demonstrates the continued resonance of these doctrinal precepts with his insistence that the "fundamental truth about our Army" is that "the Army is people."²⁶⁹

Army institutions likewise reflect official recognition of the importance of human factors. For example, one of the thirteen academic departments of the faculty at the United States Military Academy is that of "Behavioral Sciences and Leadership," which introduces cadets to the study of "individuals, groups, and organizations" and seeks to awaken them to "the necessity of handling human problems on a human basis"²⁷⁰

²⁶⁸ U.S. Department of the Army, *Field Manual 22-100: Leadership* (Washington, D.C.: July 1990), 38.

²⁶⁹ The Chief of Staff's homepage on the World Wide Web elaborates his thinking on this precept:

I am reminded of a story from the 8th Division in World War II. In September 1944, on the Crozon Peninsula, the German General Hermann Ramcke asked to discuss surrender terms with the American Army. General Ramcke was in a bunker. His staff brought in the 8th Infantry Division's Assistant Division Commander, BG Charles Canham, down the concrete stairway to the underground headquarters. Ramcke addressed Canham through his interpreter. He said, "I am to surrender to you. Let me see your credentials." Pointing to the American infantrymen crowding the dugout entrance, Canham replied, "These are my credentials." There is a fundamental truth about our Army. The Army is people. More than any other organization I know, the Army is people. General Creighton Abrams used to say, "The Army is not made up of people, the Army is people." He was right then, it is right now, and it will be right well into the 21st century.

General Dennis J. Reimer, Chief of Staff, U.S. Army, at <http://www.hqda.army.mil/ocsa/credent.htm> (1998).

²⁷⁰ The United States Military Academy traces the inclusion of behavioral science in the cadet curriculum to shortcomings identified by General Eisenhower:

The Combat Studies Institute and the Center for Army Leadership, two departments of the Command and General Staff College, expose officers to historical perspectives and theoretical models on the human dimension of combat.²⁷¹ The U.S. Army Research Institute for the Behavioral and Social Sciences is "[t]he Army's Center for Soldier-Oriented Research and Development" and directs its energies to "Building the Ultimate Smart Weapon—the American Soldier."²⁷² "Human factors" research takes place in the Engineering Psychology laboratory at West Point, New York, in the Human Engineering

Too frequently we find young officers trying to use. . . ritualistic methods in the handling of individuals—I think that both theoretical and practical instruction along this line could awaken the majority of cadets to the necessity of handling human problems on a human basis and do much to improve leadership in the Army at large.

General Dwight D. Eisenhower to Major General Maxwell D. Taylor, Superintendent, United States Military Academy, 2 January 1946, quoted on homepage of the Department of Behavioral Sciences and Leadership, <http://129.29.64.244:80/bsl/>; Internet; accessed 1 March 1998. General Eisenhower's interest in the study of human behavior ran deep. In addition to reforming the curriculum at West Point, he established, in 1950, the Conservation of Human Resources Project, which focused early research on the tremendous losses of manpower sustained during World War II when large numbers of men were rejected for service or separated because of mental or emotional disability. See generally Eli Ginzburg, *The Lost Divisions* (New York: Columbia University Press, 1959).

²⁷¹ The missions and course offerings of these organizations can be found on the World Wide Web at <http://www-cgsc.army.mil/cal/index.htm> (Center for Army Leadership, 1998) and at <http://www-cgsc.army.mil/csi/index.htm> (Combat Studies Institute, 1998). Both of these pages were accessible as of 2 March 1998.

²⁷² The mission and activities of this organization, which is located in Alexandria, Virginia, are posted on the World Wide Web at <http://www-ari.army.mil/> (accessed on 2 March 1998).

Labs at Aberdeen, Maryland, and in the Aviation Medical Research Laboratory at Fort Rucker, Alabama, among other places within the Army.²⁷³

Yet despite these official nods toward the human dimension, General DePuy's vision of the Army as an organization of weapons with crews dominates official thinking about readiness. As we have already seen, the Army, the Joint Staff, and Congress measure our Task Force Myth's capability to repulse the enemy's attack at Chagang-do by statistics relating to personnel strength, to proficiency on predefined mission essential tasks, and to equipment numbers and serviceability. If Lieutenant Colonel Myth reports that his battalion has only seven M1 tanks on hand (out of fourteen on the battalion's MTOE) and that only five of those are fully mission capable, the downward tug of those statistics on the battalion's overall C-rating is heavy. The C-rating signals that additional copies of the sixty-two ton, nine million dollar main battle tank, designed in 1972 at the height of the Cold War, must be acquired if readiness is not to suffer.²⁷⁴ However, if

²⁷³ The purpose of studies in "engineering psychology" at West Point is articulated in a course description on the Behavioral Sciences and Leadership home page:

Unfortunately, engineers often design sophisticated equipment but fail to consider the soldiers that are going to operate it. Soldiers who operate such equipment are likely to become frustrated, commit costly errors, and possibly even cause harm to themselves or others. Engineering Psychology will teach you how to combine human and machine agents into cooperative systems that will enhance battlefield performance. New technologies create new challenges about how to 'couple' human intelligence and machine power in a single integrated system that maximizes overall performance.

See http://129.29.64.244:80/bsl/eng_psych.htm; Internet; accessed 2 March 1998 (identifying locations of human factors research in Maryland and Alabama); In

²⁷⁴ The nine million dollar figure reflects the original cost as well as the cost of recently procured upgrades. See *Jane's Armour and Artillery*, ed. Christopher F. Foss, 17th ed., at 136-37, 142 (Alexandria, VA: Jane's Information Group Ltd., 1996), 136-37,

Myth reports that his battalion has 100 percent of its assigned personnel and that these personnel are school-trained in their specialties, there is little or no downward tug on the overall C-rating, even if the ranks are filled with listless, tentative, disgruntled, quarreling soldiers who are unaccustomed to field conditions.²⁷⁵

Officer Survey Responses on Peace Operations and Human Factors

The value of better integrating human factors into the readiness paradigm appears to be supported by a survey, taken in conjunction with the writing of this paper, of Army officers who participated in peace operations in the 1990s. The survey responses also shed some light on how officers perceive the effects of peace operations on the Army's ability to fight in "traditional" wars. The population under consideration consisted of all 126 Army officers in the 1997-1998 resident course at Fort Leavenworth's Command and General Staff College who noted in student record forms upon entry that they had served in one or more of the Army's deployments to the Sinai, Somalia, Haiti, Macedonia, and Bosnia. Ninety of the 126 officers returned completed surveys. Appendix C reprints the survey instrument.

142. This characteristic of the C-rating is a result of the fact that the Modified Table of Organization and Equipment serves as the baseline for unit status reporting. In other words, much of the Unit Status Report is driven in the organizational design stage of the force development process. See generally below notes 309-311 and accompanying text.

²⁷⁵ The tendency to reduce readiness to mechanical expression also appears in the writing of military history. See Spiller, "The Tenth Imperative," 6-7: "In the first instance, so much in the history of warfare lends itself to explicit and mechanical expression. In our own time, when warfare seems so intensely technological, military writers verge upon explaining war's entire evolution in terms of war's tools."

Survey questions addressed five characteristics assumed useful to unit effectiveness in combat: self-discipline, initiative, decision-making ability, leadership skills, and ability to function for a sustained period in an austere environment.²⁷⁶ Officers surveyed were asked to rate the impact of their participation in the peace operation on these characteristics as exhibited in themselves and in the U.S. soldiers with whom they served. In addition, one question asked how the peace operation had affected soldiers' cohesion, another asked how the peace operation had affected the officer's own ability to carry out a combat mission, and another asked how it had affected the combat abilities of

²⁷⁶ Although the selection of these characteristics involved an irreducible element of arbitrariness, I nevertheless grounded the assumption that their possession proves useful in combat upon comments made by great battlefield leaders and war theorists. See, for example, William J. Slim, *Defeat Into Victory*, 550 (discussing initiative, leadership, and "hardihood"); Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (New Jersey: Princeton University Press, 1976), 186-88 (discussing, variously, the skill of the commander, experience and courage of troops, patriotic spirit, cohesion, training in privation, bravery, adaptability, stamina, and enthusiasm). I also attended to characteristics that thoughtful commentators predict will be necessary on future, technologically advanced battlefields. See, for example, Sean D. Naylor, "Sea Change Ahead in Leadership Training: But Future Battlefields Still Will Depend on People," *Army Times*, October 13, 1997, 32 (describing conclusions of the annual report of the Army After Next project that suggest future soldiers will "require higher levels of mental agility and psychological resilience"); Michael Mazarr, *The Revolution in Military Affairs: A Framework for Defense Planning* (Carlisle, PA: U. S. Army War College, 1994), 3 (predicting that the future will demand that units be "small, agile, flexible, able to take on a wide range of missions, highly trained and motivated, and imbued with the need for decentralized initiative"); Martin van Creveld, *Technology and War From 2000 B.C. to the Present* (New York: Free Press, 1989), 314 (opining that war is, in the end, "an affair of the heart" in which characteristics such as duty, honor, courage, loyalty, and fear remain separate from "technology, whether primitive or sophisticated"); General Gordon R. Sullivan and Colonel James M. Dubik, *War in the Information Age* (Carlisle Barracks, PA: U.S. Army War College, 1994), 15. ("Even in the information age, war will remain a human endeavor, subject to emotion and characterized by the shedding of blood and the effects of chance.").

accompanying soldiers. Officers with field experiences in one or more Combat Training Center rotations were asked similar questions with regard to the impact of these experiences on the five characteristics under examination. Fifty-five of the ninety respondents completed the Combat Training Center portion of the survey, which provides a useful source for comparative analysis.

The ninety respondents accounted for a total of 109 deployments to peace operations (fourteen respondents participated in two or more). Of these 109 deployments, six were to the Sinai, fourteen were to Somalia, forty-two were to Haiti, two were to Macedonia, and forty-five were to Bosnia. The sample thus reflects a preponderance of Haiti and Bosnia experience.

The aggregate results reveal that the surveyed officers think positively about the value of their peace operations experiences. Officers responding that participation in the peace operation had increased the presence of the characteristics far outnumbered those responding that participation had resulted in a decrease. This was the case across all five characteristics and with respect both to the officers' opinions of themselves and to their opinions of the soldiers with whom they served. Also, seventy percent of the officers completing the survey felt that participation had increased their ability to carry out a future combat mission; only about eight percent felt that participation had decreased their ability in this respect. Their opinion of the impact of peace operations upon accompanying soldiers was less favorable but still generally positive: fifty-five percent of the officers felt that participation had increased accompanying U.S. soldiers' ability to

carry out a future combat mission, while sixteen percent felt that participation had decreased soldiers' combat ability.

Table 3. Officer Opinions of Peace Operations'
Effects on Themselves

As a result of participating in the peace operation(s), my ability to carry out a future combat mission:

	Frequency	Percent
Decreased a lot.	0	0
Decreased a little.	7	7.8
Stayed about the same.	20	22.2
Increased a little.	47	52.2
Increased a lot.	16	17.8
Total	90	100.0

Table 4. Officer Opinions of Peace Operations'
Effects on Soldiers

As a result of participating in the peace operation(s), the ability of U.S. soldiers I worked with to carry out a future combat mission:

	Frequency	Percent
Decreased a lot.	0	0
Decreased a little.	14	16.1
Stayed about the same.	25	28.7
Increased a little.	35	40.2
Increased a lot.	13	14.9
Total	87 ²⁷⁷	100.0

²⁷⁷ This figure is lower than the total in Table 3 because three officers did not serve in U.S. Army units.

Responses pertaining to separate characteristics of the officers themselves were strongly favorable. A frequent response with respect to any particular characteristic was that it "stayed about the same" (frequencies of this answer ranged from forty to sixty-seven percent, depending upon the characteristic). Still, thirty-three percent felt that as result of the peace operation their self-discipline had increased (either "a little" or "a lot"). Forty-seven percent felt that their initiative had increased. Fifty-nine percent felt that their decision-making ability had increased. Fifty-four percent felt that their leadership skills had increased. Fifty-seven percent perceived an increase in their ability to function for a sustained period in an austere environment (hereinafter the "endurance characteristic"). The number recording decreases in any of these areas never exceeded seven percent, and in all cases the recorded decrease was "a little" rather than "a lot." Thus, the percentage of officers who felt that a characteristic had stayed the same or increased was ninety-three percent or higher with respect to every separate characteristic.

Officers also saw improvement in separate characteristics of the soldiers with whom they served. Again, a frequent response with respect to any particular characteristic was that it "stayed about the same" (frequencies of this answer ranged from eighteen to fifty-three percent, depending upon the characteristic). Yet a full thirty-nine percent saw an increase in soldier discipline. Fifty-eight percent felt that soldiers' initiative had increased. Sixty percent felt that soldiers' decision-making ability had increased, and the same percentage perceived an increase in soldiers' leadership skills. Sixty-five percent believed that soldiers' ability to function for a sustained period in an

austere environment had increased. Again, the number recording decreases in these areas was small, never exceeding ten percent, and again in all cases the recorded decrease was “a little” rather than “a lot.” Thus, the percentage of officers who felt that a characteristic of soldiers had stayed the same or increased was ninety percent or higher with respect to every separate characteristic.

To the question of how the peace operation affected cohesion, the responses were comparably positive. About eighteen percent felt that cohesion of the soldiers with whom they had served “stayed about the same.” Seventy-five percent felt that cohesion had increased (about forty-eight percent said “a little,” about twenty-six percent said “a lot”). Seven percent felt that cohesion had decreased a little.²⁷⁸

These data have limitations. The officers surveyed who were not combat veterans could only conjecture (however intelligently) about what a combat mission would require of them and of soldiers and about how various experiences might affect their abilities in combat. The five characteristics (six if soldier cohesion is included) are merely assumed to contribute to combat effectiveness. As has been already mentioned, the sample consisted predominantly of officers who deployed to Haiti and to Bosnia, operations in which the mission, the threat, the rules of engagement, and other factors may have combined to create closer approximations to war than existed in the Sinai or Macedonia operations.²⁷⁹ The sample, though large enough to permit application of the central limit

²⁷⁸ Appendix D contains the statistics in tabular form. Appendix E depicts the branches and deployments of the surveyed officers.

²⁷⁹ The section of the present chapter entitled “Integrating Categories of War and Operations Other Than War,” below, surveys differences and similarities among varied

theorem and to allow statistical inferences, may have been systematically biased to present a rosy picture of all professional experiences, given that resident Command and General Staff College students rank in the top half of their peer group. Finally, by similar reasoning, the sample—consisting mostly of officers who deployed as Captains and Majors—may have been systemically biased to discount degradation that peace operations may cause in higher level collective tasks, appreciation for which supposedly comes only at higher levels of responsibility.

Still, the data seem consistent with the survey results obtained in Professor Miller's study of soldier attitudes toward peacekeeping in Macedonia.²⁸⁰ Also, while generally positive attitudes toward the impact of peace operations might be inexplicable within (or irrelevant to) the mechanical paradigm of readiness, these attitudes are hardly surprising within an integrating paradigm. If human factors are as important as du Picq maintained, and if peace operations expose officers and soldiers to friction and cultivate worthy characteristics, then we should expect to find that experienced officers appreciate these things.

operations, including operations during war. Appendix A highlights salient differences and similarities among the peace operations that are the focus of this paper.

²⁸⁰ See chapter 3, above. These positive responses pertaining to characteristics of soldiers also seem consistent with anecdotal interview data. See, for example, Command Sergeant Major Dwight E. Anderson, 1st Battalion, 18th Infantry, deployed in Macedonia in 1996, interview by Major Richard Thurston, 14 June 1996, in Schweinfurt, Germany, transcript 90th Military History Detachment records: "Macedonia is a great place to 'grow' NCOs. The squad leaders are in charge of the Ops and the fire team leaders are the guys that run all of the patrols. They are given a lot of responsibility. The battalion chain of command gave them a lot of trust, and they never failed to live up to that trust. From that perspective, the mission was also a success. We came back from the mission clearly a much stronger, much better battalion."

It is not compelling to object to the survey results on the basis that peace operations are inherently flawed training grounds for war because they rarely approximate combat conditions. Combat itself can be overrated as a contributor to readiness. By April 1944, the United States 34th Infantry Division had accumulated more than 136 combat days in Italy; however, the large number of previously aggressive 34th veterans rendered ineffective during this period due to chronic anxiety disorders revealed that combat can prove detrimental to readiness, even if equipment and weapons remain abundant and even if most soldiers remain alive and physically intact.²⁸¹ Moreover, when equipment and weapons do break or get destroyed, and when soldiers do die, the organization loses both materiel and the benefits of experience. This illustration is enough to establish that war itself should not be the basis of comparison in the readiness debate. The impact of peace operations on readiness should be compared not with the impact of war, but with the impact of typical peacetime training. As the Private Henry Fleming remarked in *The Red Badge of Courage*, combat itself can be "too much of a good thing."²⁸²

²⁸¹ See, for example, Colonel Albert J. Glass and Lieutenant Colonel Calvin S. Drayer, "Italian Campaign (1 March 1944-2 May 1945): Psychiatry Established at Division Level," in United States Army Medical Department, *Neuropsychiatry in World War II*, vol. II, eds. Colonel William S. Mullins and Colonel Albert J. Glass (Washington, D.C.: Office of the Surgeon General, Department of the Army, 1973), 47, 49-51 (discussing "Old Sergeant's Syndrome"). See also, generally, *Report of the War Office Committee of Enquiry Into "Shell-Shock"* (London: His Majesty's Stationery Office, 1922); Roger J. Spiller, "Shell Shock," *American Heritage* 41, no. 4 (May/June 1990): 75-87.

²⁸² Stephen Crane, *The Red Badge of Courage* (New York: Random House, Inc., 1951), 72.

The best peacetime training, which occurs at the Combat Training Centers,²⁸³ is a formidable basis of comparison. The responses of the fifty-five Command and General Staff College students who had participated in one or more Combat Training Center rotations were overwhelmingly positive about the impact of those experiences. Eighty-nine percent felt that Combat Training Center participation had increased their ability to carry out a future combat mission. Eighty-five percent of the officers felt that participation had increased accompanying soldiers' ability to carry out a future combat mission. In each of the separate characteristics, a large majority of the officers saw increases. Indeed in every category, the percentage of officers recording increases due to Combat Training Center experience was higher than the percentage recording increases due to peace operations experience.²⁸⁴

Yet the average maneuver battalion trains at a Combat Training Center only once every two years, and the remainder of the typical peacetime training cycle is beset with distractions.²⁸⁵ Also, the benefits gained in the various individual characteristics under

²⁸³ See, for example, General David A. Bramlett, Commanding General, U.S. Army Forces Command, "Forces Command: The Heart of America's Army," *Army: 1996-97 Green Book* (October 1997): 45, 46: "The training strategy that enables FORSCOM units to execute such a wide variety of missions is built around world-class combat training centers"

²⁸⁴ Appendix F contains the Combat Training Center data.

²⁸⁵ See, for example, Captain Christopher Farley, Observer-Controller "Main Support Battalion: Opportunity Training at the National Training Center," in Center for Army Lessons Learned, *Combat Training Center Quarterly Bulletin*, No. 97-15, 3rd Qtr. 1997, ch. 4 ("But there is one problem that plagued Task Force Smith in the days of the Korean War that is still a growing concern for today's commanders: available training time."); Center for Army Lessons Learned, "Maneuver Operations," *National Training Center Trends Analysis*, 4QFY94 - 2QFY96, No. 97-3, TA.4 ("Units report to NTC a

consideration from even the best training are not necessarily redundant with those gained during peace operations.

For example, officers whose peace operation deployment lasted three months or longer recorded particularly strong increases in the endurance characteristic. Of the

Table 5. Officer Opinions of Peace Operations
Effects on Endurance

	As a result of participating in the peace operation(s), my ability to carry out a future combat mission:	As a result of participating in the NTC/JRTC/CMTC rotation(s), my ability to carry out a future combat mission
Decreased a lot.	0.0 %	0.0 %
Decreased a little.	3.6 %	0.0 %
Stayed about the same.	37.5 %	41.7 %
Increased a little.	37.5 %	47.2 %
Increased a lot.	21.4 %	11.1 %
Total	100.0%	100.0%

ninety officers who completed the survey, fifty-six deployed on peace operations lasting three months or longer. Of these fifty-six, twenty-one percent felt that their ability to function for a sustained period in an austere environment had “increased a lot.” By

systemic problem in accomplishing Home Station training.”); Ibid., “Command and Control Operations,” TA.1 (“[Observer-Controllers attribute unsatisfactory execution of [the military decision-making process] to a lack of focus which begins at Home Station.”); Ibid., “Air Defense Operations,” TA.3 (“The problems with early warning seem to generate from failure to define standard procedures in unit SOPs and train to those standards at Home Station.”).

comparison, only eleven percent of those who had also participated in one or more Combat Training Center rotations felt that their ability to function for a sustained period in an austere environment had "increased a lot" as a result of those experiences. Table C compares these data which, in combination with the data cited above, indicate that peace operations and rigorous peacetime training each can complement the other's contribution to readiness. Rotations at the National Training Center, the longest Combat Training Center exercises, last only about twenty-eight days.²⁸⁶

If, as these data suggest, peace operations can make a distinct contribution to improving endurance over a sustained period, then their value is significant. The Commander of Task Force Eagle may have had just such a distinct contribution in mind when he exhorted his division to take advantage of the peace operation in Bosnia:

The impact of sustained operations should be, for our junior leaders, a career-defining experience that internalizes into their professional souls the lessons of doing things right. We must take advantage of this unique opportunity to create a cadre of professional soldiers that are able to sustain operations and have the moral courage to do what is right all the time.²⁸⁷

This modern observation about the "unique opportunity" presented by sustained operations echoes much older sentiments about the value of endurance in an Army.

²⁸⁶ Major James Cassella, former Observer-Controller at the National Training Center, interview by author (9 April 1998).

²⁸⁷ Major General William L. Nash, Commander, 1st Armored Division and Task Force Eagle, "Training Guidance, 1996," quoted in U.S. Department of the Army, U.S. Army Training and Doctrine Command, Center for Army Lessons Learned, *Newsletter No. 97-12, Tactics, Techniques, and Procedures for Sustainment Training While Employing: Lessons Learned from Operation Joint Endeavor* (Fort Leavenworth: CALL, June 1997), II-6.

Napoleon's fifty-eighth maxim states that "[t]he first quality of a soldier is constancy in enduring fatigue and hardship. Courage is only the second. Poverty, privation and want are the school of the good soldier."²⁸⁸ Clausewitz, in a chapter of *On War* devoted to "Military Virtues of the Army," identifies virtue in an army "whose physical power, like the muscles of an athlete, has been steeled by training in privation and effort; a force that regards such efforts as a means to victory rather than a curse on its cause"²⁸⁹ Von Freytag-Loringhoven's classic text on *The Power of Personality in War* includes a section entitled "War's Chief Demand is Endurance Under Hardship."²⁹⁰

Our paradigm of readiness should better account for human factors, such as endurance, that appear to be enhanced by participation in peace operations. One of the specific recommendations in chapter 5 will consist of statistical measures that could be added to Unit Status Report calculations; however, the integrating paradigm seeks a more fundamental linkage between human and material factors. Another statistical measure, mechanically calculated, cannot be the entire answer. Du Picq observed that "Army organizations and tactical formations on paper are always determined from the

²⁸⁸ Napoleon, *Military Maxims*, in *Roots of Strategy*, ed. Brig. Gen. T.R. Phillips (Harrisburg, Pennsylvania: Stackpole Books, 1985), 425 (Maxim 58).

²⁸⁹ Clausewitz, *On War*, ed. Howard, 187.

²⁹⁰ Hugo von Freytag-Loringhoven, *The Power of Personality in War*, trans. Stefan T. Possony and Daniel Vilfroy, in *Roots of Strategy, Book 3: 3 Military Classics*. (Harrisburg, PA: Stackpole Books, 1991): 234. See also *Report of the War Office Committee of Enquiry Into "Shell-Shock,"* 190: "Training should be sufficiently prolonged to ensure that the soldier is not only physically fit and efficient, but also that he has had time to acquire such a standard of morale as will enable him to put the welfare of his unit before his own personal safety."

mechanical point of view, neglecting the essential coefficient, that of morale.”²⁹¹ To replace the mechanical paradigm with an integrating paradigm, it will be necessary to reject the purely “mechanical point of view” and to inject the “the essential coefficient” of human factors into our thinking about readiness.²⁹²

Integrating Military Art and Science

No particular purpose is served by attempting to distinguish precisely between military art and military science. Depending on its modern usage “art” may mean, variously, the “human ability to make things,” the “creativity of man as distinguished from the world of nature” or “any specific skill or its application.”²⁹³ “Science” today means “systematized knowledge derived from observation, study, and experimentation carried on in order to determine the nature or principles of what is being studied.” Both terms have enjoyed wide application in the study of war. More than 2400 years ago, Sun Tzu wrote in *The Art of War* that war is of vital importance to the State, and that it must be thoroughly studied.²⁹⁴ Marshal de Saxe described war as a science, but enigmatically added that “[a]ll sciences have principles,” while “war alone has none.” In his *Art of War*, Jomini described strategy and grand tactics as arts, referred to logistics as a science,

²⁹¹ Du Picq, *Battle Studies*, 148.

²⁹² To use an analogy devoid of the mathematical language of coefficients, incorporation of human factors involves thinking of an army as “a genuine social organism” Keegan, *Face of Battle*, 71,

²⁹³ *Webster's New World Dictionary of the English Language*, 1978 ed., s.v. “art.”

²⁹⁴ Sun Tzu, *On the Art of War*, trans. Lionel Giles, in *Roots of Strategy*, ed. Brig. Gen. T.R. Phillips (Harrisburg, Pennsylvania: Stackpole Books, 1985), 21.

and suggested that each of these studies constitutes part of the art of war—yet he offered no clear distinction between art and science.

Clausewitz came closest to providing a reasoned distinction between the two terms, before giving up. The “object of art,” he opined, “is creative ability.”²⁹⁵ The “object of science,” however, “is knowledge.”²⁹⁶ Clausewitz discovered that this approach had its own difficulties, because the categories are not exclusive of one another. The “practice” of art requires knowledge, whereas “no element of science can exist without some element of art.”²⁹⁷ Clausewitz next appears to have sought a distinction in the notion that art requires judgment, whereas science consists merely of “premises resulting from perceptions.”²⁹⁸ While he was prepared on this basis to find “art of war” a less objectionable term than “science of war,” he nevertheless concluded that both terms were unsatisfactory, because their use “has unintentionally caused war to be put on a par with other arts and sciences, resulting in a mass of incorrect analogies.”²⁹⁹

²⁹⁵ Clausewitz, *On War*, Howard ed., 148.

²⁹⁶ Ibid.

²⁹⁷ Ibid.

²⁹⁸ Ibid.

²⁹⁹ Ibid., 149. Some modern writers continue to attempt the distinction. See, for example, Harry G. Summers, *On Strategy: A Critical Analysis of the Vietnam War* (Novato, CA: Presidio Press, 1982), 196: “Modern warfare requires the application of both the science and the art of war. The science of war is in a constant state of change, driven by new technological developments which can radically change the nature of the battlefield. The art of war, on the other hand, involves the critical historical analysis of warfare.”

Clausewitz is perhaps too pessimistic. By foregoing the logical gymnastics necessary to distinguish the two terms, one discovers that their combination has a useful meaning. The degree program for which this paper is submitted defines “military art and science” as “the study of the development, operation, and support of military forces in peace and war.”³⁰⁰ Perhaps in recognition that the somewhat awkward, compound term requires further definition, the pamphlet describing the program elaborates that military art and science “includes the interrelationships of military forces with economic, geographic, political, and psychosocial elements of national power to achieve national objectives” and that it “constitute[s] the scholastic discipline of the military profession.”³⁰¹

A moment’s reflection on “military art and science,” thus defined, leads to the conclusion that the topic of readiness should be at the center of this discipline. At its essence, readiness is about the capability of military forces to contribute to the achievement of national objectives.³⁰² An additional moment’s reflection leads one

³⁰⁰ *Student Text 20-10: Master of Military Art and Science (MMAS) Research and Thesis* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1997), 1.

³⁰¹ Ibid.

³⁰² Again, I am using “readiness” in the broader, nontechnical sense described in note 5 above, rather than in the narrower sense employed, for instance, in General Frederick J. Kroesen, “Readiness: The Lion in the Fight,” in *Army* (March 1997), 11-12 (arguing that Goldwater-Nichols has given a powerful new voice for “readiness” to regional Commanders-in-Chief, who “think[] first about going to war tomorrow” with the result that research and development for modernization will suffer).

further to the conclusion that military art and science should flourish in any sound paradigm of readiness.

Yet the mechanical paradigm frustrates the advancement of military art and science. It reduces the determination of readiness to calculations of whether enough weapons are being acquired and optimally employed and enough soldiers are being recruited and made technically proficient.³⁰³ It promotes efficiency, technology, and management—admittedly a piece of the discipline—but at the expense of infecting the objectivity of analyses, discouraging creative approaches, discounting the role of judgment, and foreclosing consideration of relevant experiences. The integrating paradigm of readiness invigorates military art and science by directly treating these ills.

The mechanical paradigm infects analyses of operational requirements with conflicts of interest and discourages creative approaches. Without endorsing the shrill accusations of some authors that defense contractors and the military have conspired to squander the post Cold War “peace dividend,”³⁰⁴ one can justifiably question whether the

³⁰³ Recall the essential transformation that occurred when the mechanical paradigm first became dominant. See Geyer, “German Strategy in the Age of Machine Warfare, 1914-1945,” 541: “The optimal use of weapons, instead of the “art” or “science” of military leadership, was seen as guaranteeing military victory.”

³⁰⁴ See, for example, Sanford Gottlieb, *Defense Addiction: Can America Kick the Habit?* (Boulder, CO: Westview Press, 1997), 4. Gottlieb’s book is the latest in a tradition that includes several popular Cold War era critiques of the defense establishment—e.g., A. Ernest Fitzgerald, *The High Priests of Waste* (New York: Norton, 1972), Edward N. Luttwak, *The Pentagon and the Art of War: The Question of Military Reform* (New York: Simon and Schuster, 1984), and Richard A. Stubbing, with Richard A. Mendel, *The Defense Game: An Insider Explores the Astonishing Realities of America’s Defense Establishment* (New York: Harper & Row, 1986)—as well as dozens of other volumes stretching back to Eisenhower’s farewell address of 1961. This literature provides a chronicle of the recent history of the mechanical paradigm.

influence of weapons producers on long-term readiness is a healthy one. From 1947 to 1990, the United States spent the equivalent of 297 billion dollars a year on defense (in 1995 dollars).³⁰⁵ Since 1990, the spending has occurred at the rate of about 286 billion dollars a year (again, in 1995 dollars).³⁰⁶ Even granting the arguments that diverse regional threats have emerged in the wake of the Soviet Union's demise, it is difficult to fathom why the collapse of our lone rival superpower should result in so small a decrease in defense expenditure. The answer lies, of course, in the fact that entire branches of our forces are built around particular types of weapons systems and that entire communities—and the political fortunes of their elected officials—are sustained by the economic benefits of defense facilities and contracts.³⁰⁷ The most celebrated and

Luttwak's book, for instance, contains a chapter entitled "The Materialist Bias," which addresses many characteristics of the paradigm in provocative, readable prose. For a competent history of how World War II gave rise to the structure of defense industries that has survived to the present day, see Gregory Hooks, *Forging the Military-Industrial Complex: World War II's Battle of the Potomac* (Chicago: University of Illinois Press, 1991).

³⁰⁵ Lawrence J. Korb, "Hooked on Hardware," *The Washington Monthly* (May 1997): 60 (reviewing Sanford Gottlieb's book).

³⁰⁶ Ibid.

³⁰⁷ For a sampling of recent information and varied perspectives on the relationship between defense contractors and the military departments, see, e.g., Association of the United States Army, "Army Weaponry, Equipment, and New Technologies," *Army: 1997-98 Green Book* (October 1998): 272-300; 24-31; Leslie Wayne, "800-Pound Guests at the Pentagon," *New York Times* (Mar. 15, 1998): sect. 4, p. 5; Jacques Gansler, *Defense Conversion: Transforming the Arsenal of Democracy* (Cambridge: MIT Press, 1995); Lawrence J. Korb, "Military Metamorphosis," *Issues in Science and Technology* (Winter 1995): 75 (reviewing Gansler); Gordon Boezer, Ivars Gutmanix, and Joseph E. Muckerman, "The Defense Technology and Industrial Base: Key Component of National Power," *Parameters* (Summer 1997): 26-51; Asher H. Sharoni and Lawrence D. Bacon, "The Future Combat Systems (FCS)," *Armor* (Sep/Oct 1997): 29-33; Sean D. Naylor, "Future Army—What Stays What Goes: Will the Army's

expensive examples of defense spending inertia are perhaps the Navy's Seawolf submarine and the Air Force's F-22 Advanced Fighter, but the Army's appetite for Abrams and Bradley upgrades and for a smorgasbord of technologies (to be mounted on these armored systems with the aim of "win[ing] the information war") also could impress the skeptical observer as, at times, outrunning operational needs.³⁰⁸

The integrating paradigm would mitigate the effects of vested interests by taking seriously the Army's own force development model. The first step in that model is to "determine requirements," and one authoritative description of how this should occur states that "[r]equirements are determined holistically and are driven by warfighting concepts focused on the future . . ."³⁰⁹ The emphasis on "holism" and "concepts" is well-placed, because these overarching ideas are intended, within the model, to provide the discipline with which technological developments in the industrial sector are held in

Redesign Drive Traditional Ground Maneuver Forces Into History?" *Army Times*, April 20, 1998, 12-14.

³⁰⁸ Spending on procurement of Seawolf submarines during fiscal year 1998 was scheduled to be about 2.6 billion dollars. Spending on research and development for the F-22 during fiscal year 1998 was scheduled to be about 2 billion. Spending on the Abrams tank upgrade program in fiscal year 1998 was scheduled to be about 622 million dollars, making it the largest single procurement program in the Army budget. Spending on Bradley upgrades during fiscal year 1998 was scheduled to be about 125 million dollars. Spending on research and development for the Army's "digitization" program in fiscal year 1998 was scheduled to be about 157 million dollars. See Lt. Gen. Richard L. West, U.S. Army retired, "The FY 1998 Army Budget in Perspective: Prelude to Change," *Army* (May 1997): 24, 28.

³⁰⁹ U.S. Army Command and General Staff College, *C430 Text: Resource Planning and Force Management* (Fort Leavenworth: CGSC, January 1998), 3-2 to 3-4 (borrowing heavily from U.S. Army War College, *How the Army Runs: A Senior Leader Reference Handbook* (Carlisle: USAWC, 1997)).

their proper place. Technology must be harnessed to the “overarching warfighting concept” rather than the other way around.³¹⁰ Something called the “integrated concept team” is formed within Training and Doctrine Command to develop the overarching concept. This team includes representatives from major Army commands, from the other services, from academia, and from industry, and its function is “to capture the synergy of the group” and to ensure that the concept implements the National Military Strategy and other strategic documents.³¹¹ The integrating paradigm would ensure that the requirements determination process really does stimulate and support creative approaches for the future, as it is intended to do, and that the process regards past methods and present defense industry products and research investments with appropriate skepticism.

The mechanical paradigm subtly discounts the role of discriminating judgment and blocks the incorporation of relevant operational experiences into future doctrine, training, and equipment design. An example involving an item of equipment that performed well in Somalia, Haiti, Macedonia, and Bosnia serves to illustrate the point. The “up-armored” High-Mobility, Multipurpose Wheeled Vehicle (HMMWV) that was deployed to these operations with cavalry and military police units in limited numbers is a modification of the standard HMMWV that went into production in 1983 and was

³¹⁰ Ibid.

³¹¹ Ibid. In addition to “determine requirements,” which is the first step in the force development model, the other steps are “design organizations,” “develop organizational models,” “determine organizational authorizations,” and “document organizational authorizations.” Ibid., 3-3 to 3-15. The output of the final step consists of authorization documents, such as the Modified Tables of Organization and Equipment (MTOEs) that serve as the baseline for calculations of C-Ratings on unit status reports.

fielded to the Army in the mid-1980s.³¹² The up-armored HMMWV—according to an assessment that recently appeared in the professional journal of the armor branch—could hardly have been more suitable to operations in Bosnia.³¹³ It ran thousands of miles of patrols, verified weapon storage by the former warring factions, monitored election polling sites, and secured diplomatic missions undertaken to maintain communication with local officials. It did all of this with fuel economy and low wear and tear on the roads and infrastructure, relative to the heavily armored vehicles in the country. Moreover, its light armor provided soldiers protection against rounds 7.62mm and smaller, against shrapnel from 155mm artillery and smaller, and against land mines, while its .50 caliber machinegun and MK-19 automatic grenade launcher gave the vehicle and crew firepower that could dominate almost all threats in the region.³¹⁴

Yet the tone of the article is almost apologetic with regard to the comparative disadvantage of the bulky, road-gouging, fuel-hoarding Abrams tanks and Bradley fighting vehicles in this mission environment. The author takes pains to applaud how the tanks' "overwhelming bulk and firepower conveyed an aura of invincibility," and to preserve a role for tanks in destroying enemy armor, however scarce enemy armor was after the first six months of the operation.³¹⁵ Without denigrating the author, clearly a

³¹² See *Army 1997-98 Green Book*, 274-75.

³¹³ Captain Jonathan C. Byrom, "Up-armored HMMWVs: The Answer for Peacekeeping Operations," *Armor* (Jan/Feb 1998): 35-36

³¹⁴ See *ibid.*

³¹⁵ At this point, former warring factions had placed their armored vehicles and heavy weapons in cantonment areas in compliance with the Dayton Accords. See General Framework Agreement for Peace in Bosnia and Herzegovina, Nov. 21, 1995,

dutiful and conscientious officer simply reporting on his experience in a recent deployment, these statements are deep and troubling bows to the mechanical paradigm.³¹⁶ Regardless of how genuine the “aura” and “armor-destroying” contributions of the tanks might have been, the role of military art and science seems to be to determine whether these contributions can be provided more cheaply and effectively by other means. Task Force Myth would appear to need heavy armor and large main guns in order to repulse the hypothetical enemy at Chagang-do, and this operational requirement must certainly be preserved in the readiness calculus, but to shield the tank from discriminating judgment in the Bosnia environment is to double-count its contribution to our preparedness for some combination of major theater wars and diverse smaller contingencies.

The integrating paradigm would encourage military art and science to incorporate *all* relevant experiences from past operations into our thinking about readiness. Experience indicating that the up-armored HMMWV enjoys a comparative advantage over heavy armor in peace operations is valuable feedback on the utility of one set of operational capabilities in a particular environment.

Perhaps the most valuable feedback during peace operations occurs, however, in the area of logistics, which Jomini suggested was both a “science of detail” and a

Republic of Bosnia and Herzegovina-Republic of Croatia-Federal Republic of Yugoslavia, art. IV, para. 5(a), reprinted in *International Peacekeeping* (Oct.-Nov. 1995): 108-27; Major Fred Johnson, former member of Combined Arms Assessment Team serving with Multinational Division North, Bosnia-Herzegovina in 1996, interview by author, 7 November 1997.

³¹⁶ Similar bows appear in James, “Big Tank Little Bridge: Is There a Position on the Peace Operations Team for Heavy Armor?”

“general science, forming one of the most essential parts of the art of war”³¹⁷ The mechanical paradigm, with its concern for high “tooth to tail” ratios, ensures that even historical writings about logistics in traditional wars remain relatively unpopular within the military profession.³¹⁸ But despite evidence indicating that many combat support and combat service support tasks in modern peace operations are identical to those that would be required in modern wars,³¹⁹ the professional literature capturing the relevant feedback

³¹⁷ Antoine Henri Jomini, *Summary of The Art of War*, ed. Brig. Gen. J. D. Hittle, in *Roots of Strategy, Book 2: 3 Military Classics* (Harrisburg, PA: Stackpole Books, 1991), 528.

³¹⁸ See William S. Cohen, “Report of the Quadrennial Defense Review,” *The Officer* (Jul. 1997): 26-36: “Our aim in taking these manpower reductions is to preserve the critical combat capabilities of our military forces—‘the tooth’—while reducing infrastructure and support activities—‘the tail’—wherever prudent and possible.” See also General Frederick J. Kroesen, U.S. Army retired, “The Moral Obligation to be Intelligent: Congress and the Quadrennial Defense Review,” *Army* (July 1997): 6: “[The Army] is not inefficiently organized or overmanned today, and we need to remember that ‘teeth fall out when the gums shrink.’” See also Charles R. Schrader, “Logistics in Peace Operations and Humanitarian Assistance,” *Parameters* (Summer 1996): 151, 157: “Printed material available on logistics in situations that do not involve combat indicates that what was tooth may be tail—and tail, tooth—in this new operating environment. A shift in command and staff emphasis in planning and conducting these new operations should follow recognition of that proposition. Success will hinge on the degree to which institutional biases are overcome.”

³¹⁹ See, for example, Lieutenant Colonel Theodora Hamilton, Commander, Forward Support Battalion, in Somalia in early 1993, interview by Dr. Robert K. Wright, Jr., and Dr. Susan Canedy, 24 June 1993, CMH Catalog No. RHIT-C-003 transcript, pages 29-31, U.S. Army Center for Military History, Washington, D.C. (describing use of mission essential task list skills and applauding the adaptability of soldiers during the deployment); Captain George Woodard, Commander 516th Signal Company, in Somalia in early 1993, interview by Dr. Saunders, 21 July 1993, CMH Catalog No. RHIT-C-140 transcript pages 8-9, U.S. Army Center for Military History, Washington, D.C. (describing the intensive practice acquired in tactical satellite operation); Chief Warrant Officer Four Mark A. Fortunato, 7th Transportation Group, Harbor Master’s Office, deployed in Haiti in 1994, interview by Major Thomas Zeik, 27 September 1994, printed in *Oral History Interviews: Operation Uphold Democracy*, ed. Cynthia L. Hayden (Fort

on logistics is thin, and what literature there is remains largely ignored.³²⁰ The integrating paradigm would ensure that logistics insights gained from peace operations—into fueling, fixing, arming, manning, moving, and sustaining a force, often across oceans and great distances—receive their due attention from military professionals.³²¹ Also, although the fortuities of the budget process make predictions impossible, integration of the full spectrum of relevant experiences into military art and

Bragg, NC: XVIIIth Airborne Corps, 1995), 162-68 (describing the set up of a Lighterage Control Center in Port-au-Prince); Second Lieutenant Kurt Lee Beurmann, Commander Arrival and Departure Airfield Control Group, 403d Transportation Company, deployed in Haiti in 1994, interview by Major Thomas Zeik, 1 October 1994, printed in *Oral History Interviews*, 172-74 (describing the running of an ADACG); Major Dale A. Jones, U.S. Army, Officer Commanding, General Support Company, 1st Battalion, Royal Electric Mechanical Engineers (REME), 1st Armored Division (United Kingdom), deployed in Bosnia in 1996 and 1997, interview by author, 6 April 1998 (describing maintenance operations).

³²⁰ See Shrader, "Logistics in Peace Operations and Humanitarian Assistance," 156: "American military officers focus on command in combat—be it on land, at sea, or in the air—rather than on staff work, the preparation for war, or the support of war-fighting forces. This long-standing combat-command bias is also found among logisticians, which is understandable given 20th-century warfighting techniques."

³²¹ Army doctrine refers to the six functions listed in the text as the "tactical combat service support functions." U.S. Dept. of the Army, *Field Manual 100-7, Decisive Force: The Army in Theater Operations* (Washington, D.C.: DA, 1995), 5-21. Intuitively, one suspects that the "move," and "sustain," and to a lesser extent the "fuel" and "fix" functions will be heavily exercised in many peace operations, but because such operations typically involve low expenditures of munitions and few deaths, the "arm" and "man" functions will receive far less exercise than in mid-intensity conflict. The operational logistics functions, however, will be more fully exercised during many peace operations that require the sizable projection of forces. See, for example, U.S. Dept. of the Army, *Field Manual 100-16, Army Operational Support* (Washington, D.C.: DA, 1995), 3-8 (listing theater materiel management, movement control, terrain management, facilities positioning, and distribution as the operational logistics functions). The greater relative applicability of operational logistics conforms to other parallels between the operational art and peace operations, which are noted in the next section of this chapter.

science might alter the dynamic that presently leaves units performing logistics intensive operations underfunded.³²²

What is proposed is nothing less than integrating a questioning frame of mind with that traditional mindset which enables military forces to function under great strain and hardship.³²³ In the words Michael Howard used during his famous Chesney

Memorial Gold Lecture on "Military Science in an Age of Peace,"

[t]he fundamental problem may not be, how we can provide more of X; how we can stretch our resources to provide additional quantities or develop a bigger and better X with longer range and better protection or greater speed. The basic question is why do we need X anyway? What is its function? Is that function essential? Can it be performed more cheaply and effectively by other means?

For this kind of analysis one needs the sceptical, inquiring, implacably agnostic spirit of the scientist. This is not the normal cast of mind of the military profession. The disciplined acceptance of traditional values and of traditional solutions is the natural product of the military environment, and the problems of combining this attitude with the scientist's scepticism and agnosticism lies at the root of military education and of military training at every level.³²⁴

At the operational level, "the familiar activity distinction between operations and logistics begins to blur." U.S. Dept of the Army, *Field Manual 100-7*, 5-20.

³²² See, for example, Thomas E. Ricks, "The Clinton Budget: Army Officials Feel Shortchanged by Military Outlays," *Wall Street Journal* (Feb. 3, 1998): A10 (quoting retired Army Lieutenant General Richard Trefry as commenting "[t]he Army gets 24 percent of the money but carries 70 percent of the load" and describing a briefing slide that states "'[t]he world has changed, the strategy has changed, the requirements have changed, the Army has changed,' but '[t]he funding paradigm has NOT changed.'").

³²³ See, e.g., Keegan, *Face of Battle*, 19-20: "Officer-training makes use of simulation techniques to a far greater extent than that for any other profession; and the justification, which is a sound justification, for the time and effort and thought put into these not very exciting routines is that it is thus only that an army can be sure—hopeful would be more accurate—of its machinery operating smoothly under extreme stress. But besides the achievement of this functional and corporate aim, the rote-learning and repetitive form and the categorical, reductive quality of officer-training has an important and intended—if subordinate—psychological effect."

³²⁴ Howard, "Military Science in an Age of Peace," 3, 6.

The operative word here is "combining." Our professional admiration should extend not only to traditionally venerated combat commanders such as Lieutenant General Matthew Ridgway, who in Korea during January of 1951 rallied Eighth Army by ordering aggressive patrols against the Chinese,³²⁵ but also to independent thinkers such as Lieutenant General Lesley McNair, who in Washington in 1940 dared to be skeptical of German armored successes with Blitzkrieg and so built the majority of American forces around the triangular infantry division.³²⁶ Our demand for the combination of talents exhibited by these two different leaders adds another layer of meaning to "mechanical." In the context of military art and science, the "mechanical paradigm" refers to reflexive or reductive thinking when the interests of readiness are best served by skepticism and questioning.

Integrating Strategic and Tactical Levels

The mechanical paradigm—which equates Task Force Myth's readiness to its C-rating, its proficiency on mission essential tasks, and its recent experiences at combat training centers—is concerned exclusively with the tactical level of war. Task Force Myth is ready for war if it has materiel, as well as technically proficient men and crews, in sufficient numbers to defeat an attacking enemy mechanized regiment or a defending enemy mechanized company. The not-so-subtle implication of the hypothetical future

³²⁵ See, for example, Fehrenbach, *This Kind of War: A Case Study in Unpreparedness*, 439-43.

³²⁶ See, for example, Russell F. Weigley, *History of the United States Army* (Bloomington: Indiana University Press, 1984), 468.

scene used throughout this paper is that wars are decided in land engagements or battles, in this case the Battle of Chagang-do.

Engagements and battles are the stuff of the tactical level. Clausewitz conceived of this level as involving confrontations each limited in scope by a single commander's ability to control it and limited in duration by the resolution of the immediate issue over which the confrontation occurred.³²⁷ Lieutenant Colonel Chris Myth does his part to win the Battle of Chagang-do by concentrating fires or forces at the "decisive point," and his victory is a function of "the ordered arrangement and maneuver of combat elements in relation to one another and to the enemy"³²⁸ Victory at the tactical level can be pictured as dead enemy soldiers, burning enemy tanks and vehicles, and enemy survivors who lack the will or resources to continue advancing to their objective. Also, victory at this level can be fully understood without reference to the larger aims the President may have served by positioning United States forces in North Korea in the first place.

These larger aims are the stuff of the strategic level. Strategy is "the art and science of employing the armed forces and other elements of national power during peace, conflict, and war to secure national security objectives."³²⁹ The elements of national power, besides the military element implied by this definition, are diplomatic,

³²⁷ See, for example, Michael Howard, *Clausewitz* (Oxford: Oxford University Press, 1983), 36.

³²⁸ U.S. Dept. of the Army, *Field Manual 100-5*, 6-3.

³²⁹ *Ibid.*, Glossary-8.

informational, and economic in nature.³³⁰ In the Cold War, the United States strategy could be summarized in the word “containment”—the containment of Soviet aggression.³³¹ In the post Cold War period our strategy has been “engagement and enlargement”—engagement with allies and with security arrangements and initiatives around the world and enlargement of the community of free market democracies.³³² Yet if the military element of national power is to be harnessed to strategy, then tactical outcomes must be arranged so as to serve a coherent set of larger ends. In other words, while victory in battle is the end being sought at the tactical level, it must also be a means, when viewed from the strategic level, to some broader strategic end.

Tactical victory is an absorbing, even intoxicating goal for armies and nations. Complete absorption in the tactical level, however, can be disastrous. The opening chapter of Colonel Harry Summers’ popular interpretation of the Vietnam War is entitled “Tactical Victory, Strategic Defeat.”³³³ The chapter begins by quoting a North Vietnamese colonel, who concedes that Americans never lost on the battlefield while also insisting that this fact was “irrelevant.”³³⁴ Fifty years earlier, the German Third Supreme

³³⁰ See Ted Davis, “A Brief Introduction to Strategic Concepts,” in U.S. Army Command and General Staff College, *DJCO Selected Readings Book (Module 1)* (Fort Leavenworth: CGSC, 1997), 1-A-8 to 1-A-9.

³³¹ George F. Kennan, “The Sources of Soviet Conduct,” *Foreign Affairs* 25 (July 1947): 566-82.

³³² *A National Security Strategy for a New Century* (Washington, D.C.: The White House, May 1997).

³³³ Summers, *On Strategy*, at 1.

³³⁴ *Ibid.*

Command of World War I, to which the roots of the mechanical paradigm can be traced, had focused upon the tactical level to the exclusion of all else:

The Supreme Command was unable to define the purpose of action except in tactical terms, and thus did not provide direction or leadership. Ludendorff's angry words about this issue can serve both as an epithet for the 1918 campaign as well as a reminder for generations of military technocrats to follow. "I do not want to hear the word operation. We hack a hole [into the front]. The rest comes on its own."³³⁵

Of course, exclusive absorption in the strategic level is no less disastrous. Strategy without the tactical means to implement it is akin to playing chess, or, to use another analogy, is akin to commerce without cash payment.³³⁶ The failed British Dardanelles campaign in 1915 is an oft-studied example in which ingenious strategy was made to look ridiculous by tactical defeat.³³⁷

Another example in which tactical incompetence and defeat foreclosed contributions to strategic victory is that of 90th Infantry Division of the United States Army in World War II. This was the unit with which General William DePuy served as a young officer. The 90th, he once commented, was "a killing machine . . . of our own

³³⁵ Geyer, "German Strategy in the Age of Machine Warfare, 1914-1945," 552. One historian has concluded that it was Ludendorff's singleminded focus on tactical victory, in combination with public heedlessness of the risks, that destroyed the civil-military balance in First World War Germany. See Gordon A. Craig, "The Political Leader as Strategist," in Paret, ed. *Makers of Modern Strategy*, 481, 484-85.

³³⁶ See Howard, *Clausewitz*, 43.

³³⁷ See, e.g., Agnew, *The Great War*, 152-57; Field Marshal Sir William Robertson, *Soldiers and Statesmen 1914-1918*, vol. 1 (New York: Scribner's Sons, 1926), 73-149.

troops.”³³⁸ The secret behind its ineptitude against enemy German forces, in DePuy’s view, lay in the appalling lack of training of its units and leaders. For DePuy, who emerged from the war with a Distinguished Service Cross, three Silver Stars, and an unquestioned reputation for personal courage and competence, the lesson to be learned from the 90th was that tactical and technical excellence must be the focus of preparation for war.³³⁹ His career-long passion for training in individual and small-unit skills attests to this. Among his most notable writings were a series of training pamphlets emphasizing tactical overwatch, an essay on the nature of the infantry squad, and a soldiers’ manual entry on how to build a foxhole that provides frontal cover while also permitting interlocking fires with adjacent positions.³⁴⁰ Army historians have described, convincingly, how DePuy’s concentration on things tactical influenced the development of Army training and doctrine in the aftermath of the Vietnam war and how that influence continues to be felt.³⁴¹ Chapter 3 outlined how DePuy’s thinking fortified the mechanical paradigm of readiness in its modern form.

³³⁸ General William E. DePuy, U. S. Army retired, quoted in Richard M. Swain, “AirLand Battle,” 3 (quoting, in turn, Lieutenant Colonel Ronnie L. Brownlee and Lieutenant Colonel William J. Mullen, eds. *Changing an Army: An Oral History of General William E. DePuy, USA Retired* (Carlisle Barracks, PA: The Military History Institute, n.d.), 2.)

³³⁹ Swain, “AirLand Battle,” 3.

³⁴⁰ Ibid. Some of these essays are reprinted in Richard M. Swain, ed., *Selected Papers of General William E. DePuy* (Fort Leavenworth: Combat Studies Institute, 1994).

³⁴¹ See Swain, “AirLand Battle;” Roger J. Spiller, “In the Shadow of the Dragon: Doctrine and the US Army After Vietnam,” 5; (“Superior training and superior weapons meant superior tactics; superior tactics tilted battle in one’s own favour. Wars made of tactics, the war on the ground of the battalion and company-grade officer—those

Neither DePuy's thinking nor the mechanical paradigm it fortified can easily accommodate emphasis upon an intermediate, "operational" level of war. Since 1982, this intermediate level has increasingly structured Army and joint service notions about warfighting. Perhaps it is no mere coincidence that many of the anomalies pushing the mechanical paradigm into crisis during the past decade have been identified by officers schooled in modern United States military doctrine, which regards the operational level as where "the real artistry of war [takes] place . . ."³⁴² Operations is the art of conducting campaigns, as opposed to merely battles or engagements. In its modern American incarnation—as distinct from related, older variants in the German and Russian armies—operational art is the connective tissue between the strategic and tactical levels.³⁴³ In the words of *Field Manual 100-5*, it "links and integrates the tactical battles and engagements

composed the totality of war as DePuy then saw it."); 8 ("But as for what was to go into this manual, under DePuy's hand, tactics became war itself."); 12 ("His analytical bent drove his view of tactics as chiefly the sum of weapons systems in action; he was not unmindful of the human dimension of warfare, as his critics claimed; he merely thought they were subordinate to firepower and capable of producing limited effect on their own. Perhaps this is why, though he knew the political dimensions of steering the new doctrine through the byzantine collection of interest groups that make up the Army, he did not foresee how these interests might criticise his doctrine once it was finished. For good or ill, DePuy's name was more intimately associated with a military doctrine than any other American soldier had been in over a hundred years.").

³⁴² Swain, "Filling the Void: The Operational Art and the U.S. Army," 162.

³⁴³ See generally John English, "The Operational Art: Developments in the Theories of War," in McKercher, *The Operational Art: Developments in the Theories of War*, 7-28 (observing, *inter alia*, that Clausewitz perceived what is today termed the operational level as a gradation of strategy); Bradley J. Meyer, "The Operational Art: The Elder Moltke's Campaign Plan for the Franco-Prussian War," in McKercher, 29-50; David M. Glantz, "The Intellectual Dimension of Soviet (Russian) Operational Art," in McKercher, 125-46. For a perspective that General Ulysses S. Grant practiced

that, when fought and won, achieve the strategic aim.”³⁴⁴ Without it, “war would be a set of disconnected engagements, with relative attrition the only measure of success or failure.”³⁴⁵ The operational level of war confronts the commander with three questions:

- What military conditions will achieve the strategic objectives in the theater of war or theater of operations?
- What sequence of actions is most likely to produce these conditions?
- How should the commander apply military resources within established limitations to accomplish that sequence of actions?³⁴⁶

It is significant that this sophisticated treatment of the operational level in Army doctrine postdates DePuy’s tenure as Commander of Training and Doctrine Command.³⁴⁷

operational art during the American Civil War, see Daniel P. Bolger, *Savage Peace: Americans at War in the 1990s* (Novato, CA: Presidio, 1995), 91-92.

³⁴⁴ U.S. Dept of the Army, *Field Manual 100-5*, 6-2.

³⁴⁵ Ibid.

³⁴⁶ Ibid.

³⁴⁷ The omission of discussion of the operational level or operational art in DePuy’s papers prior to his departure from Training and Doctrine Command is conspicuous. In later papers and public utterances, however, DePuy occasionally acknowledged this development in American military thinking, if sometimes only to seek to further the Army’s continued orientation at the tactical level. See, for example, General William E. DePuy, U.S. Army retired, “FM 100-5 Revisited,” in *Army* 30, no. 11 (November 1980): 12-17, reprinted in Swain, *Selected Papers of General William E. DePuy*, 303-309, 308: “The decision to defend is the most the NATO commanders believe they can extract from the forces available. These are strategic and operational rather than doctrinal or tactical decisions.” General William E. DePuy, U.S. Army retired, Delaplane, Virginia, to Colonel Huba Wass de Czege, Director, School of Advanced Military Studies, 20 July 1985, reprinted in Swain, *Selected Papers of General William E. DePuy*, 339-340: “Control and control measures increase as we proceed down from the operational levels to the tactical levels. . . . Most of the working Army is at the lower Tactical (and technical) echelons.”; General William E. DePuy, U.S. Army retired, “Concepts of Operation: The Heart of Command, the Tool of Doctrine,” *Army* 38, no. 8 (August 1988), 26-40, reprinted in Swain, *Selected Papers of General William E. DePuy*,

The 1976 edition of *Field Manual 100-5* that so firmly bore his stamp focused upon the brigade level and below and clearly meant to serve as a tactical manual. Introduction of the operational level occurred in the 1982 edition as a result of intellectual ferment occurring at the Army War College in Carlisle, Pennsylvania and at the School of Advanced Military Studies at Fort Leavenworth, where German and Russian operational concepts were avidly studied and where civilian academic military scholars who championed the concept of operational art were viewed with less skepticism.³⁴⁸ Notably, DePuy had not included Carlisle and Leavenworth officers within the inner circle when compiling the 1976 edition. According to historian Richard Swain,

The rationale for adopting the idea of levels of war [in 1982] was to instruct senior commanders to differentiate between the variable natures of fundamental categories—specifically of maneuver—at each level, and to explore the interrelationships that existed between the levels themselves. . . . What was proposed with this particular innovation was no less than the adoption into doctrine of a holistic and integrated view of warfare, one in which the operational level was to comprehend large unit actions within a theater of war.³⁴⁹

411-26, 418 (describing Russian breakthrough operations at the Vistula on the Oder); General William E. DePuy, U.S. Army retired, Statement Before the Committee on Armed Services, United States House of Representatives, *Crisis in the Persian Gulf: Sanctions, Diplomacy, and War*, 101st Cong., 2d Sess. (4-20 December 1990), reprinted in Swain, *Selected Papers of General William E. DePuy*, 459-63, 460 (mentioning the term “operational maneuvers”); General William E. DePuy, U.S. Army retired, Delaplane, Virginia, to General Colin L. Powell, Chairman of the Joint Chiefs of Staff, 26 September 1991, reprinted in Swain, *Selected Papers of General William E. DePuy*, 465-67, 466 (describing operational and strategic maneuver in the Roman military style).

³⁴⁸ See Swain, “AirLand Battle,”; Swain, “Filling the Void: The Operational Art and the U.S. Army, 153-165.

³⁴⁹ *Ibid.*, 162.

With the Army's keystone doctrinal manual focused upon the operational level after 1982, the tactical emphasis in doctrine shifted to a series of manuals published by the Army's branch proponent schools.

Unlike the mechanical paradigm, which reduces war to tactics, the integrated paradigm of readiness builds upon all three levels of war, and particularly upon the operational level. Readiness for war is more than concentrating forces at tactical decisive points so as to grind out victory in a battle of attrition. It includes the capability to identify and then negate or destroy the enemy's "center of gravity"—according to Clausewitz, the hub of the enemy's power and movement, the characteristic from which he derives his freedom of action, physical strength, or will to fight.³⁵⁰ It includes the logistical support sufficient to achieve the operational aim without "culminating"—another Clausewitzian term that refers to a point in time when one force ceases to hold the advantage over an opposing force.³⁵¹

Because it builds upon the operational level of war, the integrating paradigm is more compatible with reforms in the military that have taken place since 1986, when Congress passed the Goldwater-Nichols Act.³⁵² That law, formally entitled the Department of Defense Reorganization Act, increased the authority of the regional combatant commanders-in-chief (CINCs). The regional CINCs are the ultimate

³⁵⁰ See Clausewitz, *On War*, Howard ed., 595-96. The concept appears in the present edition of U.S. Dept of the Army, *Field Manual 100-5*, 6-7.

³⁵¹ See Clausewitz, *On War*, Howard ed., 528.

³⁵² See Dep't of Defense Reorganization (Goldwater-Nichols) Act of 1986, Pub. L. No. 99-433, 100 Stat. 1012-17 (codified at 10 U.S.C. §§ 161-66 (1988)).

practitioners of operational art, identifying military conditions that will achieve strategic objectives in their theaters, planning a sequence of actions that will produce the military conditions, and then applying resources against the plan.³⁵³ They are also newly empowered voices in the readiness debate, contributing to a system of feedback that enables the Chairman of the Joint Chiefs of Staff to assess whether the entire joint force can fulfill its responsibilities under the National Security Strategy.³⁵⁴

The integrating paradigm also recognizes the useful exposure peace operations can provide to the challenge of translating strategic objectives into military conditions. The linkage between strategic objectives and military conditions in peace operations is typically tight. Soldiers in the Sinai MFO mission observe and report violations of an international peace agreement that the United States supports, as a matter of national

³⁵³ See, for example, Bolger, *Savage Peace: Americans at War in the 1990's*, 90-96.

³⁵⁴ See note 130 above, and accompanying text. General Kroesen argues—see Kroesen, “Readiness: The Lion in the Fight,” 11—that the commanders-in-chief of combatant commands (CINCs) are less likely than the service chiefs of old to invest research, development, and acquisition, maintenance, and construction. Yet this is not immediately obvious. While the CINCs may be more concerned than service chiefs about “going to war tomorrow morning,” *ibid.*, the formers’ interest would seem to be in maximizing readiness over the short and long term (i.e., “military capability” within military jargon) and thus in continuing necessary investment in research, development, etc. The disinterested observer might conclude, moreover, that CINCs are likely to have a more immediate grasp of what sorts of long-term investment are necessary and to be less influenced by parochialism. With the newly powerful Joint Requirements Oversight Council (JROC) and the Secretary of Defense looking to screen out redundant research and procurement among the services, the more catholic perspective of the CINCs is likely to influence major spending decisions in the years to come. See generally Robert D. Walz, “The Joint Strategic Planning Systems; Planning, Programming, and Budgeting System; and Joint Operational Planning and Execution System,” in *DJCO Selected Readings Book (Module 1)* (Fort Leavenworth: CGSC, 1997), 3-B-1 to 3-B-9.

strategy.³⁵⁵ In Somalia, commanders and soldiers wrestled with the practical problems of implementing a security council resolution that called upon the United States and other nations to “to establish as soon as possible a secure environment for humanitarian relief operations in Somalia.”³⁵⁶ In Haiti, the challenge was to implement strategic aims that entailed the “departure from Haiti of the military leadership,” the “prompt return of the legitimately elected President,” the “restoration of the legitimate authorities of the Government of Haiti,” and the establishment and maintenance of “a secure and stable environment”³⁵⁷ In Bosnia, military forces helped implement a peace agreement that was brokered in and by the United States and that required, among other tasks, the

³⁵⁵ Appendix A describes the salient military aspects of this peace agreement and summarizes key dimensions of recent peace operations supported by the United States to implement its national security strategy.

³⁵⁶ Security Council Resolution 794, United Nations Security Council Official Records, U.N. Doc. S/RES/794 (1992). One practical problem of implementation that arose involved the question of whether to disarm the warrior groups in Somalia. See, for example, Bolger, *Savage Peace: Americans at War in the 1990's*, 285: “Hoar [the CENTCOM Commander] avoided any ambitious plan to demilitarize the warrior groups.”

³⁵⁷ Security Council Resolution 940, United Nations Security Council Official Records, S/RES/940 (1994). The difficulties associated with implementing the resolution are reflected in a quotation that appears in Lawrence A. Yates, “Military Stability and Support Operations: Analogies, Patterns, and Recurring Themes,” 51: “An Army colonel recalling his staff officer duties in Operation *Uphold Democracy* in Haiti stated, ‘The single hardest thing that I’ve had to do in my military experience was to come up with an OOTW [operations other than war] campaign plan’” See also Colonel John P. Lewis, J-5 for Joint Task Force 190, deployed in Haiti in 1994, interview by Major Christopher Clark, 44th Military History Detachment, 18 October 1994, printed in *Oral History Interviews*, 221-22: “And I think, probably because a division operates at the tactical level so much, the linkage between the operational level and the strategic level was so difficult to sort out. So as we kept getting a lot of political requirements from Department of State—do this now, make this happen, get the International Police

separation of warring factions, the opening of roads, and the resolution of disputes.³⁵⁸

Practice in setting concrete military conditions that will achieve these and other strategic aims is fundamental to operational art.³⁵⁹

Integrating Categories of War and Operations Other Than War

The mechanical paradigm of readiness relies upon a sharp distinction between war and other operations. The Unit Status Reporting system reflects capability ratings that are driven by tables of organization and equipment designed for large-scale armored and mechanized conflict. The mission essential task lists of Army units remain focused on war. The Combat Training Centers, though being pushed by real-world events to accommodate variations in their stock scenarios, continue to glamorize tactical battles with advancing Soviet-style regiments. The doctrinal distinction between war and

Monitors in, start the weapons buy-back program, get repatriation off the ground, start to build the interim police force—all those things were being accelerated.”

³⁵⁸ See Bosnia General Framework Agreement for Peace.

³⁵⁹ The fact that peace operations and operational art overtly demand a resourceful search for tactical means that will implement strategic ends can be interpreted as a salutary reinforcement of civilian control of the military. In other words, the tactical tail is prevented from wagging the strategic dog because it is specifically and systematically linked to strategic direction through operational art. Yet this is not the only interpretation. See, for example, B.J.C. McKercher and Michael A. Hennessy, “Introduction,” in McKercher, *The Operational Art: Developments in the Theories of War*, 1, 4: “The paradigm of the operational level clearly holds budgetary and force utilization implications. Potentially the concept serves as a vehicle for military leaders to tie the hands of those they are supposedly serving. For instance, should a president desire to make war, he would be presented with army plans based on full integration of all arms.” The integrating paradigm, because it integrates the skeptical mind of military art and science into the requirements determination process—see section entitled “Integrating Military Art and Science,” above—includes a check on the sort of military dominance McKercher and Hennessy imagine.

operations other than war helps perpetuate these characteristics of the mechanical paradigm.

The recent history of the distinction illustrates the challenges posed to the integrating paradigm by existing doctrinal categories. Prior to 1993, the distinction was enforced by the covers of a manual, because the Army's keystone doctrinal statement, *Field Manual 100-5, Operations*, mostly ignored operations other than war altogether.³⁶⁰ Entirely separate manuals, such as *Field Manual 100-20, Military Operations in Low-Intensity Conflict*, were assigned the heavy doctrinal lifting for other types of operations.³⁶¹ Then the June 1993 edition of *Field Manual 100-5* assumed some of the burden itself by expressly incorporating the full range of military operations within its

³⁶⁰ In the checkered history of *Field Manual 100-5*, there are isolated flourishes of acknowledgment that armies do more than fight full-scale wars. See, for example, Department of the Army, *Field Manual 100-5* (Washington, D.C.: Dep't of Army, 1962), 8: United States military forces must be able to operate effectively across the spectrum of war, in any area where conflict may occur, and under any foreseeable restraints, employing their military power selectively in accordance with assigned missions and prescribed limitations. The force they apply must be both adequate to, and consistent with, assigned objectives. United States military forces must, therefore, be capable of operating effectively throughout the world in . . . wars in infinite combinations of locale, intensity, duration, and participants."

³⁶¹ See Department of the Army, *Field Manual 100-20, Military Operations in Low-Intensity Conflict* (Washington, D.C.: Dep't of Army, 1990) (dealing principally with support to counterinsurgency). See generally Colonel Richard M. Swain, "Removing Square Pegs From Round Holes: Low-Intensity Conflict in Army Doctrine," *Military Review*, (December 1987): 2 (outlining the evolution of doctrine for low intensity conflict); Sam C. Sarkesian, "The Myth of U.S. Capability in Unconventional Conflicts," *Military Review* (September 1988): 2 (analyzing doctrinal categories for unconventional conflicts); U.S. Dept. of the Army, *Field Manual 100-37, Terrorism Counteraction* (Washington, D.C.: Dep't of Army, 1987) (representing a separate manual dealing with operations other than counterinsurgency).

covers. Chapter 2 of the 1993 edition created the category "Operations Other Than War" and sought to depict its relationship to "War" in a table that associated the new category with "States of the Environment" consisting of "Peacetime" and "Conflict."³⁶² Although the table reflected the possibility of "Combat" occurring within the newly coined category, it carefully placed war above a dividing line marked by "Goal" (the distinct goal of war was "Fight and Win") and by "Examples" (war was uniquely exemplified by "Large scale combat operations," "Attack," and "Defend").³⁶³ A caption to the table cryptically pronounced that "[t]he states of peacetime, conflict, and war could all exist at once in the theater commander's strategic environment."³⁶⁴

The remaining treatment of operations other than war was confined to chapter 13 of the 1993 manual. Lest there have been any doubt about the Army's main emphasis, the introduction to that chapter reminded readers that "[t]he Army's primary focus is to fight and win the nation's wars."³⁶⁵ Nevertheless, the narrative continued, "Army forces and soldiers operate around the world in an environment that may not involve combat."³⁶⁶ While the fundamentals described in chapter 2 were said to apply to all Army operations, chapter 13 listed distinct principles associated with operations other than war.³⁶⁷ By summarizing some of the differences between large scale combat and the broad array of

³⁶² U.S. Dept. of the Army, *Field Manual 100-5*, 2-1.

³⁶³ *Ibid.*

³⁶⁴ *Ibid.*

³⁶⁵ *Ibid.*, 13-0.

³⁶⁶ *Ibid.*

³⁶⁷ *Ibid.*, 13-3 to 13-4.

other missions, the list of principles also suggested, if mostly by implication, similarities that might be shared by operations across the entire range.

The inclusion of operations other than war in the 1993 manual thus officially confronted the tidy mechanical paradigm with a few messy nuances. Still, the omnibus nature of the new category, the confinement of its treatment to a separate chapter near the end of the manual, and the identification of distinct guiding principles ensured that these nuances remained largely hidden from view. Moreover, this manner of presenting the new category created the misleading impression that while the differences between war and other operations were fundamental, the differences between types of operations other than war themselves were relatively insignificant.

A survey of the guiding principles listed in chapter 13 of the 1993 edition of *Field Manual 100-5* reveals both the doctrinal novelty and the ultimately conservative nature of the new categorization of conflict. The principle of “objective,” though afforded its own separate paragraph in the chapter on operations other than war, actually retained the same meaning it enjoyed in chapter 2 as a principle of war: “direct every military operation toward a clearly defined, decisive, and attainable objective.”³⁶⁸ Operations other than war were said to have objectives that “might be more difficult to define . . . ,”³⁶⁹ certainly a fair characterization of the situation in Haiti when United States forces hesitated over

³⁶⁸ Compare *ibid.*, 13-3 with *ibid.*, 2-4. The nine “principles of war” in the 1993 edition were “objective,” “offensive,” “mass,” “economy of force,” “maneuver,” “unity of command,” “security,” “surprise,” and “simplicity.” *Ibid.*, 2-4 to 2-6.

³⁶⁹ *Ibid.*, 13-3.

whether to prevent acts of "Haitian on Haitian" violence.³⁷⁰ Yet the objective of eliminating the heavy weapons element of the Haitian armed forces in October of 1994 appears to have been relatively simple to define.³⁷¹ Moreover, definition of the objective in war can be fraught with difficulty: witness the struggles of the Allied high command prior to the invasion of North Africa November of 1942.³⁷²

³⁷⁰ See, e.g., Center for Law and Military Operations. *Law and Military Operations in Haiti*, 37-39; Kenneth Freed, "Haitian Police Attack Crowds as American Troops Look on; At Least One is Killed and Dozens Injured as Local Forces Disperse Demonstrators Welcoming Arriving Soldiers; U.S. Policy Leaves Issue of Civil Order to Haitian Authorities," *Los Angeles Times*, September 21, 1994, A1; T.J. Milling, "Haitian Police Savagely Club Demonstrators; Man Beaten to Death at Port; Disgusted G.I.'s Forced to Watch," *Houston Chronicle*, (September 21, 1994): A1; Julian Beltrame, "U.S. Troops Watch as Haitians Beaten; At Least One Killed," *New York Times* (September 21, 1994): A1; Mark Matthews, "U.S. Forces' Failure to Intervene in Haitian-on-Haitian Violence Raises Questions," *Baltimore Sun* (September 21, 1994): 11A; Douglas Farah, "U.S. Warns Haitian Leaders on Abuses; GI Patrols Stepped Up to Stop Civilian Beatings," *Washington Post* (September 22, 1994): A1; T.J. Milling, "U.S. Troops Cleared for Deadly Force," *Houston Chronicle*, (September 23, 1994): A1; Geordie Greig & James Adams, "Sleeping with the Enemy," *Sunday Times*, (September 25, 1994): A22.

³⁷¹ Lieutenant General Henry H. Shelton, Commander, Joint Task Force 180, interview by Lieutenant Colonel Steve Dietrich, Center of Military History, 22 October 1994, printed in *Oral History Interviews: Operation Uphold Democracy*, ed. Cynthia L. Hayden (Fort Bragg, NC: XVIIIth Airborne Corps, 1995), 63-64: "I demanded, right up front, that they turn in the weapons for the Heavy Weapons Company out at Camp D'Application and I did that because we had put that . . . that was their military center of gravity; those were the bad boys, so to speak, the V150s, the howitzers; we wanted to get our hands on all of that as rapidly as we could."

³⁷² See, for example., Leo J. Meyer, "The Decision to Invade North Africa (TORCH)," in *Command Decisions*, ed. Kent Roberts Greenfield (Washington, D.C.: United States Army Center of Military History, 1987), 173-98, 189: "For weeks arguments for and against both strategic concepts were tossed back and forth across the Atlantic in what has aptly been called a 'transatlantic essay contest.' Meanwhile preparations for the attack languished." For a persuasive argument "that campaign planning is at least as important to the success of peacekeeping operations as it is to theater combat operations," see Major Michael J. Fallon, "The United Nations Protection

The 1993 manual presented “unity of effort” as a variation on the time-honored “unity of command” principle of war.³⁷³ Unity of command contemplated “a single commander with the requisite authority to direct all forces in pursuit of a unified purpose.”³⁷⁴ Unity of effort, however, recognized that the military commander might not have such authority over all elements whose efforts are necessary to achieve the objective. Other governmental agencies or the United States Ambassador to a foreign nation may be in leading roles. Alternatively, commanders may be supported by or given operational control over disparate resources—even over foreign troops—for durations of varied length. The looser arrangement suggested by “unity of effort” describes well the quasi-subordination of the battalion task force serving in Macedonia under United Nations direction³⁷⁵ and the quasi-subordination of Russian troops to the Multinational Division in the Brcko corridor of Bosnia.³⁷⁶ Yet it also describes, perhaps better than “unity of command,” the relationships characterizing joint and combined operations in which United States forces have participated during war. General Stillwell’s association

Force’s Effectiveness in Bosnia: Campaign Planning and Peacekeeping,” (Fort Leavenworth, KS: Master of Military Arts and Sciences diss., 1996), iii, 1-101.

³⁷³ U.S. Dept. of the Army, *Field Manual 100-5*, 2-5.

³⁷⁴ *Ibid.*, 13-4.

³⁷⁵ See Lieutenant Colonel Carter Ham, Commander, 1st Battalion, 6th Infantry, 3rd Infantry Division, deployed in Macedonia in 1994, interview by Major Kim R. Daniel, at Hohenfels Training Center, 18 August 1995, transcript 326th Military History Detachment records [hereinafter Ham Interview] (discussing three different chains of command to which he reported).

³⁷⁶ See, for example, Center for Army Lessons Learned, *Initial Impressions Report, Bosnia I*, xv, 104-106 (describing challenges in integrating the Russian Brigade into command and control structures designed for NATO forces).

with Chinese forces in Burma, for instance, was far from a traditional command arrangement.³⁷⁷

The “legitimacy” principle in the 1993 manual cautioned commanders and leaders engaged in operations other than war to “[s]ustain the willing acceptance by the people of the right of the government to govern or of a group or agency to make and carry out decisions.”³⁷⁸ No parallel to this imperative appeared among the principles of war. Encouragement of perceptions that a nation’s government has a situation well in hand, is, of course, critical to effective counterinsurgency operations.³⁷⁹ The principle also applies, for instance, to domestic disaster relief operations. An example is the operation in southern Florida following Hurricane Andrew in 1992, when Army officers carefully subordinated their units to the Federal Emergency Management Agency and to local Florida officials.³⁸⁰ Bolstering the legitimacy of the restored government—by resisting the tendency to solve immediate problems with military men and materiel—also formed a critical part of the United States strategy in Haiti.³⁸¹ Yet the appropriateness of this

³⁷⁷ See, for example, Slim, *Defeat Into Victory*, 77: “[Stilwell] was again greatly handicapped by the Chinese reluctance to obey his orders, and it was only by offering the stimulus of a considerable cash reward that vigour in the attack on the town could be assured.”

³⁷⁸ U.S. Dept. of the Army, *Field Manual 100-5*, 13-4.

³⁷⁹ See, for example, U.S. Marine Corps, *Small Wars Manual*, 20-21, 44.

³⁸⁰ Major Jeff Eckstein, former Commander of A Company, 43d Engineer Battalion, deployed in Florida in 1992, interview by author, 3 April 1998 (describing how military leaders scrupulously ensured that all military actions were directed by federal and local civilian authorities).

³⁸¹ Colonel Gerald A. Palmer, Commander, 55th Medical Group, interview by Major Christopher Clark, Commander, 44th Military History Detachment, 10 October

principle is not uniformly apparent in operations other than war. In Somalia, for instance, the complete absence of a functioning central government made meaningless most attempted gestures and actions to uphold legitimacy.³⁸² Nor is the principle inapplicable in wars. The allied decision to have General LeClerc's 2nd Armoured Division liberate Paris on 25 August 1944 was partly grounded in legitimacy concerns.³⁸³

Under the heading of "perseverance," the 1993 manual informed us that "[o]perations other than war may be of short duration or protracted."³⁸⁴ Participating commanders and soldiers need to be braced for the long haul, because "[p]eacetime operations may require years to achieve the desired effects," and "[u]nderlying causes of confrontation and conflict rarely have a clear beginning or a decisive resolution."³⁸⁵ Moreover, they must hold the long view firmly in mind when considering "quick contingency response options" and "decisive military action," because these short-term

1994, printed in *Oral History Interviews*, 269 (stating that the concept of medical support operations with respect to Haitian nationals "would be focused on either the saving of life and limb, or the treatment and immediate return into host nation medical facilities, the purpose being not in any way to replace the medical facilities of the country of Haiti."); John T. Fishel, "Operation Uphold Democracy: Old Principles, New Realities," *Military Review* (July-August 1997): 22, 25. ("Legitimacy was inherent in the execution of the UN mandate, the safe and peaceful arrival on the ground of US forces and the initial enthusiastic welcome by the Haitian people.").

³⁸² See, for example, Colonel F.M. Lorenz, "Law and Anarchy in Somalia," *Parameters* (Winter 1993-94), 27, 31.

³⁸³ See, for example, John Keegan, *The Second World War* (New York: Penguin Books, 1989), 411-14.

³⁸⁴ U.S. Dep't of the Army, *Field Manual 100-5*, 13-4.

³⁸⁵ *Ibid.*

fixes may conspire to frustrate long-term strategic objectives.³⁸⁶ The principle of perseverance genuinely applies to operations in the Sinai, where in twenty years no permanent resolution to Israel's security situation has developed to permit an end to the peacekeeping mission there.³⁸⁷ Yet although it is absent from the list of principles of war, perseverance also applies during and after more traditional wars: seven years of sanctions and frequently abortive weapons inspections later, the United States still must persevere in demonstrative and occasionally forceful measures against Iraq.³⁸⁸

"Restraint" was another principle announced in 1993 without analog among the principles of war. We learned that in operations other than war, rules of engagement "will be more restrictive, detailed, and sensitive to political concerns than in war" and that "these rules may change frequently."³⁸⁹ Apparently wise for its own sake, restraint also was said to support the principle of legitimacy: "[t]he use of excessive force could adversely affect efforts to gain legitimacy and impede the attainment of both short and

³⁸⁶ Ibid. The use of the word "decisive," both in the definition of "objective" and in the elaboration of what "perseverance" might forswear, reflects a deeply traditional view of battle. See generally Keegan, *Face of Battle*, 55-61 (describing the prominence of decisive battle studies in the military historical tradition).

³⁸⁷ See generally Bolger, *Savage Peace: America at War in the 1990's*, 135-60. See also Yates, "Military Stability and Support Operations: Analogies, Patterns, and Recurring Themes," 60: "An awareness of cultural differences might also temper overoptimistic progress reports, reveal the fallacy of short-term solutions to long-term problems and caution against unrealistic end states."

³⁸⁸ See, for example, Bruce B. Auster, "What's Next With Saddam? After The Deal On U.N. Inspections, Confrontation Looms Over Sanctions," *U.S. News and World Report* (9 March 1998): 36.

³⁸⁹ U.S. Dept. of the Army, *Field Manual 100-5*, 13-4.

long-term goals.”³⁹⁰ Soldiers in Macedonia attest that the rules during Operation Able Sentry demanded great restraint against provocative Serbs,³⁹¹ and soldiers in Haiti commented on the challenge of switching from status-based rules of engagement—under which the Haitian armed forces were declared hostile—to the conduct-based rules that applied as soon as the Carter-Cedras agreement was concluded.³⁹² Surely these restrictions on the use of force contribute to accomplishment of the mission, and effective performance within such constraints requires the adoption of a mindset different from that required to assault an enemy machinegun nest.³⁹³ Still, to imply that the need for

³⁹⁰ Ibid.

³⁹¹ See, e.g., Ham Interview; Lieutenant Colonel Gene C. Kamena, Commander, 3rd Battalion, 12th Infantry, deployed in Macedonia in 1995, interview by Major Richard Thurston, 30 May 1996, in Baumholder, Germany, transcript 90th Military History Detachment records; Major Brian P. Stapleton, Executive Officer, 3rd Battalion, 5th Cavalry, 1st Brigade, 1st Armored Division, deployed in Macedonia in 1995, interview by Major Kim R. Daniel, 16 August 1995 at Kirch Goens, Germany, transcript 326th Military History Detachment records.

³⁹² See, for example, Memorandum, Major Bradley P. Stai, Chief, Civil Law, Office of the Staff Judge Advocate, XVIIIth Airborne Corps and Fort Bragg, AFZA-JA-CV, to Staff Judge Advocate, subject: After Action Report (AAR)—Operation Uphold Democracy, at 20 (2 Feb. 1995) (copy on file with the Center for Law and Military Operations, Charlottesville, Virginia); Center for Law and Military Operations, *Law and Military Operations in Haiti*, 37-38; Joint Warfighting Center, *Joint Task Force Commander's Handbook for Peace Operations* (Suffolk, Virginia: Joint Warfighting Center, 28 Feb. 1995), 75 (describing distinction between “status-based” and “conduct-based” rules of engagement); Robert F. Baumann, “Operation Uphold Democracy: Power Under Control,” *Military Review* (July-August 1997): 13, 15.

³⁹³ See, for example, Ham Interview: “Soldiers do what they are trained to do, and it takes a long time to change that. There is not some switch that you can hit and say ‘now you’re a peacekeeper,’ or ‘now you’re a warfighter.’ It’s not that simple. It would be nice if it was, but it’s not. . . . It is very much a mental process that the soldiers have to go through. What we ended up doing in our training is the same thing that we did in preparing for our deployment. There were some brief classroom sessions, but we principally focused on situational exercises that concerned tactical situations involving

restraint evaporates in war would be misleading. For example, the 84th Infantry Division essentially employed "conduct-based" rules of engagement when confronted by Germans waving white flags of surrender near Geilenkirchen, Germany in November of 1944.³⁹⁴ All units encountering noncombatants on the battlefield must similarly make their use of force contingent upon whether those individuals (prisoners, wounded, or civilians) demonstrate hostile intent.³⁹⁵ Indeed, the 1993 manual partially addressed the need for restraints during war under the heading of "discipline" in chapter 2.³⁹⁶

"Security," the sixth and final principle of operations other than war, scarcely differed from the identically named, corresponding principle of war. Commanders were cautioned "[n]ever [to] permit hostile factions to acquire an unexpected advantage."³⁹⁷ The tragedies in Beirut in October of 1983,³⁹⁸ and at Khobar Towers, Saudi Arabia in

combat skills in squad and platoon battle drills." See also Unnamed First Lieutenant Infantry Platoon Leader, deployed in Somalia in 1993 and in Haiti in 1994, surveyed by Major Paul M. Rivette, Center for Army Lessons Learned, in December 1995 for *CALL Special Study*, survey forms on file with CALL: "The ROE has confused many soldiers. Putting them into a situation of a very hostile environment, without giving them a chance to regain their ability to be aggressive, would be very dangerous." See also Yates, "Military Stability and Support Operations: Analogies, Patterns, Recurring Themes," 58-60.

³⁹⁴ See, for example, Harold P. Leinbaugh and John D. Campbell, *The Men of Company K* (New York: Bantam Books, 1985), 15-31, 21.

³⁹⁵ See, for example, Major Mark S. Martins, "Rules of Engagement for Land Forces: A Matter of Training, Not Lawyering," *Military Law Review*, vol. 143 (Winter 1994): 1, 80.

³⁹⁶ See U.S. Dept. of the Army, *Field Manual 100-5*, 2-3 to 2-4.

³⁹⁷ *Ibid.*, 13-4.

³⁹⁸ See *Report of the Commission on Beirut International Airport Terrorist Act, October 23, 1983*, (Washington, D.C.: Department of Defense, 20 December 1983).

1996³⁹⁹ sternly remind commanders that American servicemembers represent strategic targets to terrorists and armed hostile elements. Yet just as an armored cavalry regiment's screen mission on the flank of an advancing corps formation during war will differ from security measures taken during a peace operation in a foreign host nation, security arrangements will differ greatly among particular peace operations. For instance, Task Force Eagle in Bosnia strictly enforced a four-vehicle-minimum-convoy rule to reduce the risk American troops might be attacked by hostile factions,⁴⁰⁰ while special forces operating in Haiti eschewed large military convoys in order to reduce the visibility of United States presence in rural villages, and so build legitimacy for local governmental officials.⁴⁰¹

Apparently persuaded by the Army's elaboration of these principles and by the new doctrinal category they supported, the doctrinal manual for joint operations adopted

³⁹⁹ "Schwalier Requests Retirement," *Air Force News Service* (31 July 1997) (reprinting statement of Brig. Gen. Terryl J. Schwalier, former commander of the 4404th Wing in Southwest Asia, following Secretary of Defense report on "Personal Accountability for Force Protection at Khobar Towers").

⁴⁰⁰ Task Force Eagle, Operation Joint Endeavor Latest Lesson Learned #68, 12 August 1996 (copy on file with Center for Army Lessons Learned): "The purpose of the four vehicle convoy is to facilitate force protection, deterring ambush and kidnapping."

⁴⁰¹ See, for example, Major Andrew C. Yee, former member of Special Forces A-Team, deployed in Haiti in 1994, interview by author, 7 April 1998. See also Bob Schacochis, "Our Two Armies in Haiti: Green Berets and Infantry," *Tallahassee Star Tribune*, Jan. 10, 1995, at 9A (discerning a difference in perceptions on the need for force protection between commanders of conventional and special forces). The imperative of force protection in Somalia led the 10th Mountain Division to designate force protection as an additional "battlefield operating system" in their planning and tracking processes. See Arnold and Stahl, "A Power Projection Army in Operations Other Than War."

the term “military operations other than war” in 1995, complete with the six principles.⁴⁰²

Colonel James Dubik, a brigade commander in Haiti, apparently remained unconvinced:

Right now we have this, I believe, false distinction between war and Operations Other Than War. And I think we couldn't be any more wrong about that distinction. What we're doing here in Haiti is a form of war. We are using force; now, we're not shooting; luckily, we're not shooting people. But there is no doubt, that what I am doing, and what people are doing in Port-au-Prince, is using or threatening to use or using the intimidating presence of force, to get other people—to compel other people to do our will, . . . So while on the political side, I understand the requirement for political leaders to send soldiers into operations like this without a formal declaration of war, and I understand the requirement to have some kind of political distinction this is not a war, for a military person, I think we're very unwise to make such a distinction in our doctrine, in our thinking, in our training.⁴⁰³

The integrating paradigm of readiness would eliminate the false distinction between military operations in war and military operations other than war, while respecting subtler, functional differences and similarities between operations of all types. With a new edition of *Field Manual 100-5* currently in draft, the Army's appears likely to drop the term “operations other than war.”⁴⁰⁴ Whether another sharp distinction arises

⁴⁰² Chairman of the Joint Chiefs of Staff, *Joint Pub. 3-0, Doctrine for Joint Operations* (Washington, D.C.: Joint Staff, 1 February 1995), V-2 to V-4.

⁴⁰³ Colonel James M. Dubik, Commander, 2d Brigade Combat Team, deployed in Haiti in 1994, interview by Colonel Dennis P. Mroczkowski, U.S.M.C., 21 October 1994, printed in *Oral History Interviews*, 368-77, 377.

⁴⁰⁴ The former head of the team assigned to draft a new edition of *Field Manual 100-5* traced the death knell for “operations other than war” to a message emanating from Training and Doctrine Command headquarters:

The term "OOTW" has served us well to provide increased visibility for new types of operations over the past several years. We have reached a point in our post-Cold War doctrinal development so we can speak with more precision about Army operations in peacekeeping, humanitarian assistance, peacemaking, and other specific missions. Since "OOTW" has served its purpose, we should begin

between war and a large category of relatively undifferentiated operations will be a matter of interest in the ongoing competition between paradigms of readiness.⁴⁰⁵

Paradigm Shifts and Change in the Army

Meanwhile, the outcome of that competition remains in doubt. The mechanical paradigm, ill-equipped to explain the human and organizational anomalies catalogued in chapter 3, lumbers along in a state of crisis so apparent that every armchair theorist—with some justification—feels as qualified as the so-called authorities to question funding and other key decisions relating to the republic's military capability.⁴⁰⁶ The integrating paradigm, equipped to explain the anomalies, hardly yet forms a fully coherent alternative, though the linkages outlined in this chapter gesture toward one.

to retire the term, while maintaining and enlarging the vital lessons learned in specific areas.

Commander, TRADOC, Message, "Commander TRADOC's Philosophy on the Term 'Operations Other Than War,'" Personal For Message DTG 272016Z Oct 95. Released by Colonel Robert Killebrew, HQ TRADOC, 31 March 1997, quoted in Fastabend, "The Categorization of Conflict," (noting further that "the Army instinct for categorization was irrepressible" and that because a draft revision of FM 100-20 was labeled "Stability and Support Operations" a rumour was circulating that SASO would replace OOTW).

⁴⁰⁵ One commentator views the need for new doctrine as stemming from a new "dynamic, inter-dimensional approach to military theory," which in turn is demanded by the revolution in military affairs. In the course of presenting this view, he advocates "a holistic view of war" and "an integrative, multidimensional approach to military theory," concepts that are broadly consistent with the integrating paradigm presented in this paper. See Antulio J. Echevarria II, "Dynamic Inter-Dimensionality: A Revolution in Military Theory," *Joint Force Quarterly* (Spring 1997): 29, 36.

⁴⁰⁶ See, for example, Rick Montgomery, "U.S. Military: Ready or Not?" *Kansas City Star*, March 1, 1998, L-6 (quoting retired officers).

Moreover, there is not yet in sight the sort of spectacular, consensus-building development that, within Kuhn's model, might precipitate a paradigm shift.⁴⁰⁷ When applying Kuhn's hypothesis about the structure of scientific revolutions to the process of change within a military organization, it is wise to consider Clausewitz' view that "[v]ery few of the new manifestations in war can be ascribed to new inventions or new departures in ideas" and that "[t]hey result mainly from the transformation of society and new social conditions."⁴⁰⁸ A societal transformation in France certainly preceded the "whole new world of military manifestations" that "Bonaparte crystallized" into the Grand Armee and that Clausewitz dissected in his *On War*.⁴⁰⁹ As we have seen, a later societal transformation in the Western world, brought about by "technical and instrumental rationality," also preceded the mechanical paradigm of readiness and all of its new manifestations in war.⁴¹⁰

Candidates for the next future paradigm-shifting societal transformation range from Huntington's clash of civilizations,⁴¹¹ to the Tofflers' third wave,⁴¹² to Kaplan's

⁴⁰⁷ See notes 95-106 above, and accompanying text.

⁴⁰⁸ Clausewitz, *On War*, Howard ed., 515.

⁴⁰⁹ Ibid.

⁴¹⁰ Geyer, "German Strategy in the Age of Machine Warfare, 1914-1945," 527.

⁴¹¹ Samuel P. Huntington, "The Clash of Civilizations?," *Foreign Affairs*, Vol. 72, No. 3 (1993): 22-49.

⁴¹² Alvin Toffler, *The Third Wave* (New York: Bantam Books, 1981); Alvin Toffler, *Powershift* (New York: Bantam Books, 1990); Alvin and Heidi Toffler, *War and Anti-War* (New York: Bantam Books, 1993).

coming anarchy.⁴¹³ Leading speculations about corresponding military transformations center on the achievement of complete situational awareness and information dominance.⁴¹⁴ Yet these are mere candidates and speculations in a noisy debate about national security—and, by implication, about readiness. It seems that we will be challenging first principles for some time to come and that the eventual triumph of an integrating paradigm is far from inevitable.

Still, meaningful and constructive change to our collective thinking about readiness is possible in the short term, even before perspectives coalesce around a new dominant paradigm. Such change might be the result of decay in the economic or other strength of vested interests committed to older ways of thinking. It might also be the result of a self-critical and effective search for new doctrine, such as was undertaken, ironically, by the armies of both Ludendorff and DePuy.

That defeat is often the prelude to the effective search for new doctrine—as with the German army beginning in 1917 and the United States Army beginning in 1976⁴¹⁵—does not bode well for the hope of bloodless change. The future case study in unpreparedness may look less like the mechanized battles fought by Task Force Smith and by our Task Force Myth and more like an engagement from Colonel Charles

⁴¹³ Robert D. Kaplan, "The Coming Anarchy," *The Atlantic Monthly*, vol. 273, no. 2 (February 1994): 44-76.

⁴¹⁴ See, for example, "The 21st Century Warrior," *Defense* 97, Issue 6 (December 1997): 6-11.

⁴¹⁵ See, for example, Lupfer, *The Dynamics of Doctrine* and Spiller, "In the Shadow of the Dragon: Doctrine and the US Army After Vietnam."

Dunlap's imagined high-tech war of 2007. As narrated by Dunlap's victorious third world leader,

Although we rarely defeated the Americans on the battlefield, we were able to inflict such punishment that they were soon pleading for peace at any price. With their economy in ruins, their borders compromised, their people demoralized, and civil unrest everywhere, they could not continue. We had broken their will! They had no choice but to leave us with the lands we conquered and the valuable resources they contain. Of the many mistakes the U.S. made in adapting to the "revolution in military affairs," several stand out: America too often assumed that the revolution would favor technologically advanced nations like herself. . . . We taught the Americans that no computer wages war with the exquisite finality of a simple bayonet thrust. Most critically, America failed to deal decisively with barbarism when confronted by it. Had she demonstrated the will to face her responsibilities as a superpower in the post-Cold War world, nations like ours might not have dared to oppose her⁴¹⁶

Regardless whether the Chinese tank or the barbaric armed faction more seriously threatens national security, our readiness for such threats will require diverse and sensible steps to reap the optimal net benefit from peace operations. Having examined the alternative paradigms of readiness at work beneath the competing views of these operations, this is the concluding task to which we now turn.

⁴¹⁶ Colonel Charles J. Dunlap, Jr., "How We Lost the High-Tech War of 2007: A Warning from the Future," *The Weekly Standard* (January 29, 1996): 22, 27-28.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

If properly exploited, peace operations can provide valuable preparation for future wars. Such operations exercise a broad set of capabilities—particularly in the areas of command and control, planning, logistics, deployment, intelligence, and small unit tasks—that are essential to effectiveness across the range of military operations. They generate friction and consequences in the real world, and because that world is complex, they demand versatility and resourcefulness. Recent survey evidence suggests that peace operations' strongest potential contribution to readiness is in the cultivation of human factors, such as self-discipline, initiative, decision-making ability, leadership skills, unit cohesion, and endurance. Moreover, their contribution to soldier endurance, translated as the ability to function for a prolonged period in an austere environment, appears to be duplicated by no other form of peacetime training.

Peace operations do not train everything. Proficient mechanized infantry, armor, artillery, antitank, aviation, and air defense crews can slow atrophy by conducting dry-fire drills, but they cannot prevent decline in certain skills, absent separate training facilities.⁴¹⁷ Atrophy is inevitable if the weapons do not deploy. Imaginative terrain

⁴¹⁷ One corollary conclusion is thus that facilities such as the gunnery range at Taborfalva, Hungary, see page 96 above, are essential for developing such skills during peace operations and should be resourced. Another is that virtual-reality simulators, such as the Unit Conduct of Fire Trainer (UCOFT)—which confronts tank and infantry fighting vehicle gunners and commanders with multiple targets in a wide range of simulated conditions—should include increased portability among their evolutionary improvements. Brigadier General James M. Dubik, Director of Training, Officer of the

walks, simulations, and professional reading can help leaders build upon limited experiences, but skills associated with the maneuver of large forces will also tend to decline during peace operations, as will skills demanding the synchronization of maneuver and fires. Soldiers learn to use discriminate and proportionate force—indispensable for battlefield responses to civilians, wounded persons, and prisoners—yet peace operations themselves do not tend to inculcate aggressiveness and killer instinct.

As with any valuable and intensive endeavor, peace operations tie up some resources and consume others. Petroleum supply companies, maintenance teams, terminal operations teams, light-medium truck companies, and water purification teams are among the most critical assets tied up during peace operations. Moreover, for every combat unit deployed on a peace operation, another is preparing for deployment, and a third is in recovery. Reserve mobilization is essential to permit the military to fight overlapping major regional contingencies while also conducting a Somalia-size operation and smaller peacekeeping deployments in Egypt and Macedonia. Resources consumed during deployment include vehicle miles, aircraft sorties, and soldier-days away from families.⁴¹⁸ Upon redeployment, time is a major resource consumed. Informal research

Army's Deputy Chief of Staff for Operations, discusses the UCOFT in "The Army's 2nd Training Revolution," *Armed Forces Journal International* (December 1997).

⁴¹⁸ Time spent away from families is not a traditional index of readiness. Besides, such a factor can cut both ways: while separations may contribute to family strains that distract married soldiers, the military exercises and operations causing the separations may result in skilled and cohesive units. Moreover, single soldiers arguably are not adversely affected by separation from families. See, for example, Colonel Gregory Fontenot, Former Brigade Commander in Bosnia from December 1995 to December 1996, E-Mail Message to planlst@pentagon-hqdadss.army.mil, subject: Peace Operations (13 April 1998), copy in possession of author: "We anticipated reup problems; but they

suggests that at least three to six months, a period preferably capped by Combat Training Center rotation, must be spent to develop proficiency with heavy weapons and with large unit fire and maneuver.⁴¹⁹

While peace operations must complement rather than substitute for other contributors to readiness, and while the nature of human factors precludes precise calculation of the overall return on time and resources invested, that return is certainly

never materialized. Young guys love this stuff and they will sign up to do it. What we did see is the mid term folks making the move to leave.” The Army today includes a far higher proportion of married soldiers, and—as suggested in the Fontenot message—beyond a certain amount of time spent away from home post, camp, or station, it is plausible that performance and retention in this group will decline significantly. The potential cost of a high optempo is also indirectly suggested by U.S. General Accounting Office, *Military Readiness: Observations on Personnel Readiness in Later Deploying Army Divisions*: “Since 1995, when peacekeeping operations began in Bosnia-Herzegovina, there has been a sustained increase in operations for three of the later-deploying divisions: the 1st Armored Division, the 1st Infantry Division, and the 10th Infantry Division. For example, in fiscal year 1997, the 1st Armored Division was directed 89 times to provide personnel for operations other than war and contingency operations, training exercises, and for other assignments from higher commands. More than 3,200 personnel were deployed a total of nearly 195,000 days for the assignments, 89 percent of which were for operations in Bosnia. Similarly, the average soldier in the 1st Infantry Division was deployed 254 days in fiscal year 1997, primarily in support of peacekeeping operations.” Colonel Michael Alvis, U.S. Army, Senior Fellow at the U.S. Institute of Peace, will complete research on this and similar readiness implications of peace operations later this year.

⁴¹⁹ If the rotation does not come soon enough for certain leaders to participate, they will run the risk of losing altogether the leader development afforded by leading a unit at one of the Combat Training Centers. See, for example, Fontenot message: “Bosnia made good platoon leaders and pretty effective TOCs. At TF and Brigade you also learned a lot about managing FA and FA radars. However; collective skills at Company and higher for high intensity eroded. The damage done is that I had two generations of platoon leaders who did not do a high intensity rotation at Hohenfels or a table 12 gunnery. I had some company commanders who had the same experience. Can't say what that will cost us.”

high. Moreover, it is a return on a sunken investment, with respect to which the economist's "opportunity cost" has no meaning. This concept applies only when a scarce resource can be allocated to a variety of different uses. When one use is chosen, the opportunity cost of that choice is the value of the next best alternative.⁴²⁰ Yet peace operations are no more optional to the military professional than any other mission. We can either exploit the valuable readiness opportunities they offer, or not.

Despite their value, peace operations tend to be viewed as distractions from the Army's "real" mission. They are caricatured as isolated exceptions to normal warrior campaigns, as frictionless chess matches, as schools for soldier passivity and tentativeness, as identical replicas of each other, and as unwelcome intrusions by civilian leaders into military affairs. This prevailing view of peace operations persists because a mechanical paradigm dominates modern thinking about readiness. That paradigm, or controlling set of assumptions, equates readiness with Unit Status Reports, with proficiency on mission essential tasks, and with Combat Training Center rotations.

A more balanced view of peace operations—one that recognizes their great potential and encourages prudent decisions about military funding, deployment, organization, equipment, and training—requires a paradigm that better integrates key dimensions of true readiness. These include the morale and endurance of the Army's soldiers, the inquiring and skeptical minds of its officers, the translation of strategy to

⁴²⁰ See for example, Paul A. Samuelson, *Economics: An Introductory Analysis*, 13th ed. (Boston, MA: Irwin/McGraw-Hill, 1989), 32-33.

tactics through operational art, and the attention to differences and similarities among all types of operations in doctrine.

Recommendations

In order for a shift to occur from the mechanical paradigm of readiness to an integrating alternative, the military profession must cut through traditional arguments and set a new course.⁴²¹ A statutory amendment, given the broad deference in military ranks to the principles of the rule of law and civilian control, could assist in setting that course.

Congress should amend section 3062 of Title 10 to state that the Army "shall be organized, trained, and equipped for prompt and sustained combat operations incident to operations on land and shall perform such other duties as the President may direct."⁴²²

⁴²¹ See, for example, Howard, "Military Science in and Age of Peace," 4 ("Failing the ultimate test of war, and even given that ultimate test, one may need a dynamic force of exceptional quality administered from outside the profession to cut through [arguments against innovation] and, with a possible irrational determination, give the order 'You *will* do this.'").

⁴²² The complete provision, with proposed deletions stricken and additions italicized, should read as follows:

Sec. 3062. Policy; composition; organized peace establishment

(a) It is the intent of Congress to provide an Army that is capable, in conjunction with the other armed forces, of--

(1) preserving the peace and security, and providing for the defense, of the United States, the Territories, Commonwealths, and possessions, and any areas occupied by the United States;

(2) supporting the national policies;

(3) implementing the national objectives; and

(4) overcoming any nations responsible for aggressive acts that imperil the peace and security of the United States.

(b) In general, the Army, within the Department of the Army, includes land combat and service forces and such aviation and water transport as may be organic therein. It shall be organized, trained, and equipped ~~primarily~~ for prompt and sustained combat incident to operations on land *and shall perform other such*

The amendment would remove a word ("primarily") that figures prominently in official and unofficial Army restatements of its roles and missions and helps perpetuate the prevailing view of peace operations.⁴²³ It would insert a phrase ("shall perform such other duties") more affirmative of the importance and legitimacy of peace operations and more conducive to a balanced view of their implications and challenges.

The Army and the Department of Defense should request, and Congress should appropriate, advance annual appropriations for peace operations based on a reasoned

other duties as the President may direct." It is responsible for the preparation of land forces necessary for the effective prosecution of war except as otherwise assigned and, in accordance with integrated joint mobilization plans, for the expansion of the peacetime components of the Army to meet the needs of war.

⁴²³ See, for example, U.S. Dept. of the Army, *Field Manual 100-5*, 2-0 ("The *prime* focus of the Army is warfighting . . .") (emphasis added), 13-1 ("The Army's *primary* focus is to fight and win the nation's wars.") (emphasis added); U.S. Dept. of the Army, *Field Manual 100-23*, 1 ("The *prime* focus of the Army is warfighting . . .") (emphasis added) (quoting *Field Manual 100-5*); U.S. Dept. of the Army, *Field Manual 100-19, Domestic Support Operations* (Washington, D.C.: DA, 1 July 1993), 1-1 ("Since the Army's inception, its mission has been to fight and win the nation's wars."); U.S. Dept. of the Army, *Field Manual 100-7*, 2-26 & A-1 (complicating command and support relationships in theater operations by referring to vague "Title 10" responsibilities that purport to give the Army Service Component Commander independent authority to control assets under combatant command (COCOM) of the regional CINC)). See also Major Richard A. Lacquement, Jr., "Maintaining the Professional Core of the Army," *Army* (January 1997), 8 ("The Army's primary mission remains to fight and win our nations wars. The problem is that the primary contingencies for which the force is ostensibly sized do not provide a firm foundation for maintaining the critical core of competent personnel."); Colonel Richard L. Strube, Jr., "Operations Other Than War and Their Ramifications for U.S. Military Capability," *Army* (January 1997), 9 ("The downsizing and restructuring of our armed forces is now nearly complete, but the ability of the restructured force to fight and win two regional conflicts is suspect. One big reason for this is the focus on OOTW, and the debilitating effect such operations have on the capability of the military to be combat ready, deployable and psychologically able to fight."). See generally Major William W. Epley, *Roles and Missions of the United States Army* (Washington, D.C., Center of Military History, 1995).

prediction of how much the Army will spend to support ongoing and unspecified future deployments. The request should not be limited to the operations and maintenance account. Rather, it should cover procurement, research-development-testing-evaluation (RDT&E), military personnel, military construction, family housing, and other appropriations adequate to defray the comprehensive equipment, training, and human costs of these contingencies and to fund investments in future capability against varied threats and in diverse settings. The operations and maintenance portion could be estimated by totaling supplemental appropriations for peace operations over the past 10 years and dividing by ten.⁴²⁴ Until a database is established through experience, suitable appropriations to the other accounts could be estimated using bottom-up analysis. The idea behind this recommendation is to make the budgeting of all military activities we undertake as the world's lone superpower honest, open, forthright, and complete. Predictions will almost never be completely accurate, and year-end adjustments will be necessary. Still, formal incorporation of peace operations into our budgeting and appropriations process could change the current dynamic, in which a deployment can be spun by cynical or self-interested observers as beggaring readiness, and in which actual negative consequences can indeed occur.⁴²⁵ Moreover, budget requests for appropriations

⁴²⁴ A very rough calculation for the ten-year figure, extrapolating to a decade the four years of data contained in U.S. General Accounting Office, *Contingency Operations: DOD's Reported Costs Contain Significant Inaccuracies*, would be about 18 billion in 1996 dollars. The annual advance operations and maintenance appropriation for contingency operations should thus be about 1.8 billion dollars. I defer to government accountants on how best to arrive at a more precise figure.

⁴²⁵ See note 27 above.

to prepare and sustain heavy forces such as Task Force Myth for major theater wars will be considered on their own terms, promoting a clearer picture of the costs and risks to national security of allowing those heavy forces to go hollow.⁴²⁶

The integrated concept team that develops the overarching concept upon which requirements are based should be permanent rather than ad hoc, and its members should be recognized masters of diverse disciplines within military art and science.⁴²⁷ Such a team could help modify the Army's force management process by further shielding the method of determining requirements from biases toward defense contractors and existing technologies. Team members should be given a skilled staff and first class research facilities. They should be encouraged to cultivate skeptical and unconstrained thought. All appropriate steps should be taken to accord the team authority, prestige, and independence. The team should be appointed personally by the Commander of Training and Doctrine Command, and the overarching concept it develops should be final, subject only to approval by the Commander and the Chief of Staff. Following approval, the concept should be regulatory rather than advisory and should serve as the authoritative basis on which all subsequent steps in the requirements determination process are taken. A team and overarching concept thus invigorated could stimulate profound and important improvements in force structure and in preparedness, while incidentally changing the S-

⁴²⁶ The recommendation of advance appropriations for peace operations implies amendment to 10 U.S.C. sec. 127a, the statute presently governing expenses for contingency operations and detailing the process by which the Department of Defense seeks incremental costs.

⁴²⁷ For a discussion of the present function of this team, see page 140 above.

level of the Unit Status Report and making it a better measure of readiness. Because the team's charter would be to integrate the best available thought and data regarding the military component of national power, its process and products could furnish an antidote to the shortcomings of mechanical thinking while promoting a balanced view of peace operations.⁴²⁸

The Department of Defense should change the definition of "military capability."⁴²⁹ The present definition triple-counts technological factors by including among its components "force structure," "modernization," and "readiness." "Readiness" and "military capability" should be synonymous, and their definition should be "[t]he ability to achieve a specific wartime or contingency objective (win a war or battle, destroy a target set, enforce a peace agreement between formerly warring factions, secure routes for the movement of humanitarian relief supplies, etc.)." The terms "force structure," "modernization," and "sustainability," should be given independent entries in the military lexicon. The current definition of readiness should be eliminated altogether. Language is important, and current language subtly but powerfully reinforces the

⁴²⁸ What is conceived in this recommendation is significantly different from independent bodies chartered by Congress to submit advisory reports, such as the recent National Defense Panel. See National Defense Panel, *Transforming Defense—National Security in the 21st Century* (Washington, D.C.: GPO, 1998), available at [database online] <http://www.dtic.mil/ndp>; Internet; accessed 30 January 1998. The ICT would ultimately develop a concept concrete enough to determine requirements and to enable the design organizations and the creation of tables of organization and equipment. In this respect it would also differ significantly from bodies such as that which produced the *Quadrennial Defense Review*, although the latter also serves a role within the Programming, Budgeting, and Execution Process.

⁴²⁹ For the present definition of military capability, see note 5 above.

mechanical paradigm, ensuring that peace operations and the human attributes they develop are discounted in our thoughts and decisions relating to readiness.

The Army should ensure that the new edition of *Field Manual 100-5* presents “comprehensive doctrine,” as that term is used by Colonel David Fastabend, the former head of the manual’s drafting team and author of a recent article on the topic.⁴³⁰ Training and Doctrine Command’s aim of “[f]olding . . . military activities short of general war into the body of Army operational doctrine and [in] not treat[ing] them as separate” is a worthy aim.⁴³¹ There exist fundamental principles, tenets, functions, guidance for command, planning, execution, and logistics that apply across the entire range of operations, and these should be addressed without categorization.⁴³² There are other aspects unique to various categories of activity, such as the need for restraint and impartiality in a peacekeeping mission, and these too should be identified in keystone doctrine and then elaborated in more specific manuals. The taxonomy of “offensive,” “defensive,” “stability,” and “support” operations, which appeared in early draft versions of the new edition, is about right, so long as due emphasis is given to the idea that pure forms of operations will be rare, and so long as the war-OOTW distinction is not

⁴³⁰ See Fastabend, “Categorization of Conflict.”

⁴³¹ General William W. Hartzog, Commander, U.S. Army Training and Doctrine Command, “FM 100-5, Operations,” directive to Lieutenant General L. D. Holder, Commander, U.S. Army Combined Arms Center, 27 October 1995 (quoted in Fastabend, “The Categorization of Conflict”)

⁴³² See Fastabend, “The Categorization of Conflict.”

resurrected in the guise of a war-SASO distinction.⁴³³ Comprehensive doctrine could mainstream peace operations, help replace the mechanical paradigm, and dispel the prevailing view of peace operations as distractions.

A refinement should be made to the manner in which the P-level of the Unit Status Report is calculated. At present, the P-level is determined by calculating strength, MOS-qualified strength, senior grade strength, and personnel turnover.⁴³⁴ These indices should remain part of the P-level, but a fifth index should be incorporated to reflect the unit's strength in terms of personnel with deployment experience. The level for this index could be P-1 if, say, 20 percent of the unit has experienced a prior peace operation or other real-world deployment, P-2 if the percentage is 15 percent, P-3 if the percentage is ten percent, etc. Such an index, however incompletely and imperfectly, could help reflect the extent to which the unit benefits from the gains in human factors that take place during peace operations. Such an index could also provide an indirect measure of how well the unit and the Army are retaining individuals who embody these gains. (and thus, too, an indirect measure of quality of life and operational tempo, as these factors affect readiness). A sixth index should be incorporated to reflect the unit's strength in

⁴³³ See *ibid.* Doctrine writers should also consider multidisciplinary academic research being conducted into alternative taxonomies of peace operations. See, for example, Paul F. Diehl, *Operations Other Than War Mission Types and Dimensions: Taxonomy of Mission Types and Tasks* (Urbana, IL: University of Illinois at Urbana-Chicago, National Academy of Sciences/National Research Council, Committee on the Enhancement of Human Performance, 18 August 1994) (draft). (recommending nineteen separate international mission types with tasks and dimensions).

⁴³⁴ See *Army Regulation 220-1*, ch. 4.

terms of personnel with Combat Training Center experience, using a similar procedure and rationale.

Training and Doctrine Command should accelerate and emphasize the publication of mission training plans for peace operations tasks. Moreover, as the statutory, force management, and keystone doctrinal recommendations described above are implemented, proponent schoolhouses should publish subordinate field manuals that place such tasks on an equal footing with traditional wartime tasks. Mission essential task list development for diverse units should reflect these systemic changes through inclusion of some tasks that are distinctive to peace operations, some that are distinctive to combat, and others that are applicable across the entire range of military operations. The title of *Field Manual 25-100*,⁴³⁵ which describes METL-development, should be changed from "Battle Focused Training," to "Mission Focused Training." Senior commanders should use their influence in METL development to ensure that METLs are not exclusively focused on high-end operations. In addition to enhancing the image of peace operations, these and similar changes would eventually affect the calculation of the T-level in Unit Status Reports and help usher out the mechanical paradigm of readiness. They would also help force eventual change in the exercises taking place at Combat Training Centers, since the commanders of training units determine which collective tasks will be trained at these important events.

⁴³⁵ U.S. Dept. of the Army, *Field Manual 25-100*.

The Combat Training Center program, meanwhile, should undergo a name change (say, to the "Capstone Training Center program") and the separate centers should begin to train peace operations in earnest. The peace operations scenarios that have been developed at the Combat Maneuver Training Center (proposed alias "Capstone Maneuver Training Center") and the Joint Readiness Training Center (name is fine) should be dusted off, refined, and given increasingly greater sophistication. The National Training Center (again, name is fine) should develop a peace operations scenario and accelerate plans to include civilian roleplayers and other complicating elements in unit rotations.⁴³⁶ The Battle Command Training Program (proposed alias the "Operational Command Training Center") should scrap the Corps Battle Simulation Program in a considerable number of its Warfighter exercises (proposed alias "Operational Command Exercises") and should hasten the development of Spectrum or some substitute that better incorporates civil affairs, logistics, legal issues, intelligence, and psychological operations.⁴³⁷ All of the centers should seek opportunities to train particular collective peace operations tasks for at least a portion of every rotation, perhaps before or after a combat engagement. The successful elements of the Combat Training Center methodology—operations group, opposing forces when applicable, after-action reviews,

⁴³⁶ As of January 1997, the National Training Center introduced contract civilian roleplayers into the box at Fort Irwin. Prior to this date, a limited number of roleplayers were drawn from the opposing force unit. Cassella interview.

⁴³⁷ See generally Center for Law and Military Operations, *In the Operations Center: A Judge Advocate's Guide to the Battle Command Training Program* (Charlottesville, VA: CLAMO, 17 June 1996).

restricted access to maneuver box, etc.—should be retained, but observer-controllers, other operations group personnel, and civilian contractors should receive thorough indoctrination in the new thinking about readiness and about peace operations. These changes would speed acceptance of the new thinking throughout the Army and would both embed and stimulate improvements to peace operations doctrine, techniques, and procedures.

The Army should incorporate baseline training guidance on rules of engagement into doctrine as well as into the soldiers' common task manual.⁴³⁸ At present, these authoritative documents mostly ignore the question of how to make the switch between mindsets, one for combat against a clearly identified enemy and one for more restrained and calibrated actions when confronted with ambiguous circumstances. It is possible to identify and train—using situational training exercises—certain principles of individual and unit self-defense that will apply across peace operations and war. The vignettes employed must stress the transition from situations in which only a potential antagonist's conduct will provide clues to hostile intentions to situations in which soldiers must fire on sight without regard to conduct (unless of course, the conduct consists of a form of surrender or incapacitation due to wound). Soldiers and officers should receive such training upon initial entry and then repeatedly following arrival at their units. The Army should develop a library of vignettes as well as sophisticated interactive simulations to

⁴³⁸ See generally Martins, "Rules of Engagement for Land Forces: A Matter of Training, Not Lawyering," 1-160. See also Headquarters, XVIII Airborne Corps, *Regulation 350-41: Training in Units* (Fort Bragg, N.C.: G-3, 1997), paragraph 2-13, ch. 22.

reinforce this training. Staffs and commanders should become adept at refining the default rules for particular missions and at introducing vignettes appropriate for training the refinements.

Finally, individual professionals within the Army should answer former Chief of Staff Gordon Sullivan's recent call for a frank debate on military affairs in the pages of the Army's journals.⁴³⁹ Not only is such a debate essential if the Army is to challenge old paradigms and test new ones,⁴⁴⁰ it is a necessary part of the education of future Army leaders. Education and a culture of vigorous intellectual activity are themselves critical components of readiness, as the reflections of a brigade commander in Haiti make clear:

I cannot tell you how many times I've drawn upon my liberal education to deal with the problems that I see here. And by liberal I mean, my formal training in philosophy and theology, in sociology, in political science, and in history. These things have been absolutely invaluable, not just previously in my career, but essential to deal with the complexity of problems that I'm dealing with here. I'm not saying that an Engineer could not deal with them, by any stretch of the imagination, but I think that we are very—we've got to be very careful in the kinds of officers that we select, and the kind of education that we give these officers. Because, more and more, you will find the junior officers dealing with the kinds of issues we're dealing with here. And a guy without a broad spectrum of what I call the classic, liberal education, is going to be conceptually out of ammunition when he comes to deal with some of this stuff.⁴⁴¹

⁴³⁹ General Gordon R. Sullivan, U.S. Army retired, "Let the Debate Flourish . . .," *Army* (April 1998): 10.

⁴⁴⁰ See, for example, Colonel James R. McDonough, U.S. Army retired, "And the Army Goes Rolling Along: But Where To?" *Army* (April 1998): 11: "The fine ideas must come from the ranks, from within the institution itself. Those ideas, however, can be polished only by competing amongst themselves, like rocks in a tumbling jar rubbing up against each other until they gleam and shine."

⁴⁴¹ See Dubik interview, 376

Tactical and technical training must remain the primary business of the Army's branch schoolhouses, but classic, liberal education must remain the basic preparation of Army officers, and education in military art and science must remain the imperative of higher level Army schools.⁴⁴² Education is the only truly effective antidote to mechanical thinking, and only a vigorous exchange of ideas will ensure that the benefits of such education will be felt in readiness.

Small Change?

Of course, many of these measures face long odds, even to reach the starting point of implementation. It may be that the view of peace operations as small change is too entrenched, too intertwined with an industrial machine culture, to shift—at least not without aid of some shocking new case of unpreparedness. Yet, as Keegan himself suggests, there is reason for cautious optimism:

If . . . there exists in the military mind neither a psychological barrier nor an institutional taboo against free discussion of the profession of arms, its ethics, dimensions, rewards, shortcomings, if military society is, as I have found it to be, a great deal more open than its enemies will admit or recognize, what then is this . . . obstacle which I have suggested stands in the way of an intellectual transition from the superficial and easy to the difficult and profound in the study of war . . . ?⁴⁴³

The difficult and profound relationship between peace operations and war summons free and serious professional thought. It challenges us, at high stakes, to reject superficial and easy explanations, however prevalent they may be. Whether we rise to that challenge

⁴⁴² See generally Roger Spiller, "The Beginnings of the Kindergarten," *Military Review* (May 1981): 2-12.

⁴⁴³ Keegan, *Face of Battle*, 24-25.

may depend upon whether the military mind is sufficiently open to contemplate a small change of soldiering.

APPENDIX A

SUMMARY DATA ON FIVE PEACE OPERATIONS

The Sinai

Number and Type of Troops/Units Deployed. The Multinational Force employs about twelve hundred Americans at a given time. The size of the entire Multinational Force is about 2200, with ten other countries contributing the remaining forces. The American contribution is typically a light infantry battalion, a support battalion (minus), an aviation company (rotary wing, minus), and a small civilian observer unit. Fiji and Columbia furnish the other two infantry battalions in the force.

Army Units Deployed. Battalions from the 82d Airborne Division and the 101st Airborne Division (Air Assault) have performed the majority of the U.S. rotations.

Nature of Mission. Observe and report status of the zone separating Egyptian and Israeli forces. This consists of the following tasks for the three infantry battalions: man observation posts, conduct reconnaissance patrols, and run vehicle checkpoints along the international boundary between Egypt and Israel, along the boundary of its zone of action, and throughout the area of observation. Americans man observation posts at twelve remote sites, each holding a rifle squad of between six and twelve soldiers. Civilian observers conduct verification tours of Egyptian and Israeli forces on either side of the zone separating them.

Time and Duration of Deployments. The operation began 25 April 1982, when Israel officially returned the last portion of the Sinai Peninsula to Egypt. A new American contingent rotates into the Multinational Force every six months.

Area of Operations. The eastern portion of the Sinai Peninsula. The Multinational Force operates in a strip of land between fifteen and thirty miles wide and about 250 miles long running from north to south along the western border of Israel and the western shore of the Gulf of Aqaba. The Americans operate in the southern three sectors of this strip (the portion along the Gulf of Aqaba).

International Legal Authority for Operation. Peace Treaty Between Israel and Egypt, 26 March 1979 (available online at http://www.us-israel.org/jsource/Peace/egypt-israel_treaty.html). The treaty document contains nine articles, a military annex, an annex dealing with the relation between the parties, agreed minutes interpreting the main articles of the treaty, and a map of the four geographic zones. The treaty grew out of the "Framework for Peace in the Middle East Agreed at Camp David," dated September 17, 1978 and brokered by President Jimmy Carter between Israeli Prime Minister Menachim

Begin and Egyptian President Anwar Sadat. The Camp David process was begun to end the tense standoff following the Arab-Israeli War that began in October of 1973. The Camp David process, though not sponsored directly by the United Nations, helped implement Security Council Resolutions 242 (November 22, 1967) and 338 (October 22, 1973).

Command and Control. Political leadership of the Multinational Force and Observers is seated in Rome, Italy, where the director general, a planning staff, and administrative offices for diplomatic activities, finances, logistics and contracting, international law, public affairs, publications, and clerical support reside. The director general is always an American, typically of ambassadorial rank. The force commander, an officer from one of the non-American participating states, has his headquarters at North Camp, near El Gorah, at the northern tip of the zone of operations.

Doctrinal Category of Operation. Peacekeeping.

Military Name(s) of Operations. MFO Sinai.

Sources. Daniel P. Bolger, *Savage Peace: Americans at War in the 1990s* (Novato, CA: Presidio, 1995), 135-50; Multinational Force and Observers, *The Multinational Force and Observers: Servants of Peace* (Rome, Italy: MFO Office of Personnel and Publications, 1993); U.S. Dept. of the Army, Headquarters, Task Force 1-327, "OPORD 25-93 (DESERT RENDEZVOUS)," (Fort Campbell, Ky: 15 June 1993).

Somalia

Number and Type of Troops/Units Deployed. At the height of Operation Restore Hope in early 1993, U.S. forces in and around Somalia totaled 25,426, a number consisting of Army, Marines, Air Force, and Navy personnel. In addition, this force was augmented by about 13,000 troops from other countries. The U.S. Army contribution consisted of an infantry division, about a battalion of special operations forces, and a large apparatus of combat service support personnel.

Army Units Deployed. The 10th Mountain Division, 3d Battalion of the 75th Ranger Regiment, 160th Special Operations Aviation Regiment, and 1st Special Forces Operational Detachment-Delta were the principal combat units deployed. Additional combat support and combat service support personnel were drawn from diverse units throughout the Army.

Nature of Mission. The mission of the Unified Task Force (UNITAF) was to secure humanitarian relief supply routes. In addition to conducting air assault operations, patrols, security operations, cordons and searches, and other combat operations, U.S. Army forces built or rebuilt over 1,100 kilometers of roads, constructed two Bailey

Bridges, escorted hundreds of convoys, confiscated thousands of weapons, and provided theater communications. Eventually the mission for special operations forces during United Nations Operation in Somalia II (UNOSOM II) included the arrest of Somali warlord Muhammed Farah Aideed.

Time and Duration of Deployments. UNOSOM I (consisting of 50 non-American observers as well as multinational security and logistics personnel who came to number 4,219) began on 24 April 1992. Operation Restore Hope (executed by UNITAF) lasted from 9 December 1992 to 4 May 1993. UNOSOM II (including an American Quick Reaction Force, logistics personnel, and special operations forces) began on 24 April 1993 and concluded on 3 March 1995. The final withdrawal of forces from Somalia took place under the direction of a combined task force known as "United Shield," involving U.S. marines and soldiers from several other countries.

Area of Operations. Roughly the southern 40 percent of Somalia, an area of about 260,000 square miles, consisting of nine humanitarian relief sectors—Mogadishu, Marka, Kismayo, Baledogle, Bardera, Baldoa, Oddur, Gialalassi, and Belet Uen. The U.S. Army Force area of operations included over 21,000 square miles.

International Legal Authority for Operation. The basis for Operation Restore Hope was Security Council Resolution 794 of 3 December 1992, which welcomed the United States' offer to help create a secure environment for the delivery of humanitarian aid in Somalia and authorizing, under Chapter VII of the United Nations Charter, the use of "all necessary means" to do so. The breakdown in civil order in Somalia had permitted warring groups of bandits to raid deliveries being made by humanitarian relief organizations in the country. UNOSOM I had been created under Resolution 751 (24 April 1992). UNOSOM II, which also invoked the enforcement provisions of Chapter VII of the Charter, was created under Resolution 814 (26 March 1993). That resolution demanded that all Somali parties implement a cease-fire and ensure the safety of humanitarian relief workers. It also authorized the arrest and detention of violators. Additional Resolutions applicable to Somalia included 733 (23 January 1992), 746 (17 March 1992), 767 (27 July 1992), 775 (28 August 1992), 837 (6 June 1993), 865 (22 September 1993), 878 (29 October 1993), 885 (16 November 1993), 886 (18 November 1993), 897 (4 February 1994), 946 (30 September 1994), and 954 (4 November 1994).

Command and Control. Operation Restore Hope (UNITAF) was conducted under a chain of command that ran from the NCA to the Commander in Chief of Central Command (CENTCOM) to Joint Task Force Somalia (also the headquarters of Combined Joint Task Force Somalia). CJTF Somalia was commanded by a U.S. Marine Corps Lieutenant General. UNOSOM II was commanded by a Turkish General, but U.S. Forces remained under the command of an Army Major General (the Quick Reaction force and Task Force Logistics) or CENTCOM (TF Ranger), with TF Ranger's operations also being coordinated by U.S. Special Operations Command (SOCOM).

Doctrinal Category of Operation. Peace enforcement.

Military Name(s) of Operations. UNOSOM I, UNITAF, UNOSOM II. The majority of U.S. Army forces participated as part of the Unified Task Force (UNITAF) under Operation Restore Hope.

Sources. The United Nations, *The Blue Helmets: A Review of United Nations Peacekeeping*, 3d ed. (New York: UN Dept of Public Information, 1997), 285-318; Bolger, *Savage Peace: Americans at War in the 1990s*, 266-338; U.S. Dept of the Army, *Field Manual 100-23, Peace Operations* (Washington, D.C.: DA, 1994), 6-15.

Haiti

Number and Type of Troops/Units Deployed. At the height of Operation Uphold Democracy, on 4 October 1994, United States troops in and around the Caribbean nation numbered about 21,000. About 2,400 U.S. troops remained on the island in March of 1995, when the United Nations Mission in Haiti (UNMIH) assumed responsibilities from the Multinational Force (MNF), led by the United States, that had conducted Uphold Democracy. Forces from more than a dozen other countries numbered about 3,600 when UNMIH assumed responsibilities.

Names of Units Deployed. The 10th Mountain Division and two battalions of the 3d Special Forces Group were the principal U.S. Army combat units that deployed to Haiti in October of 1994. The 25th Infantry Division replaced the 10th Mountain in January of 1995, and about 1300 soldiers from the 25th participated in UNMIH following its assumption of responsibility from the MNF. In October of 1995, elements from the 101st Airborne Division (Air Assault) deployed to Haiti to serve with UNMIH. 1st Corps Support Command provided the bulk of logistics support to the MNF. Prior to insertion of forces, the 82d Airborne Division had planned a combat, nonpermissive entry of Haiti, but because of the last-minute agreement of the Cedras regime to relinquish power, the 82d did not deploy. At the start of insertion of forces, about 1,800 Marines in an Air-Ground Marine Task force from the 2d Marine Division landed at Cap Haitien. On or about 6 October 1994, these marines were replaced by a brigade from the 10th Mountain Division.

Nature of Mission. Maintain a stable and secure environment. After initially securing the airfield near Port-au-Prince, ports, and living compounds, specific tactical missions included the neutralizing armed factions in the Port-au-Prince, locating weapons caches, and compelling elements of the Front for the Advancement and Progress of Haiti (FRAPH) to surrender. Following the restoration of the Aristide government, missions included diverse measures to restore civic order, support the training of a new Haitian police force (primary responsibility for this mission lay with non-military agencies),

secure election sites, introduce order to the prison system, and establish a functioning judicial structure.

Time and Duration of Deployments. Prior to Uphold Democracy, on 11 October 1993, about 200 lightly armed troops arrived in Port-au-Prince on the *U.S.S. Harlan County*. The ship turned around and left Haitian waters after a small group of gunmen demonstrated in the harbor. Operation Uphold Democracy lasted from 19 September 1994 to 31 March 1995. UNMIH assumed responsibility on 31 March 1995 and continued to operate in Haiti until 28 June 1996, when it was replaced by United Nations Support Mission in Haiti (UNSMIH), the mandate of which extended until 31 July 1997. However, February 1996 marked the end of participation by U.S. troops.

Area of Operations. The western half of the Caribbean island of Hispaniola, an area of about 28,000 square miles. Major bases of operations for the 10th Mountain Division, and later the 25th Infantry Division, were Port-au-Prince and Cap Haitien, while the special forces elements operated throughout the countryside.

International Legal Authority for Operation. The principal legal authority for Uphold Democracy was United Nations Security Council Resolution 940, of 31 July 1994, which "authorize[d] Member States to form a multinational force under unified command and control and, in this framework, to use all necessary means to facilitate the departure from Haiti of the military leadership, consistent with the Governor's Island Agreement, the prompt return of the legitimate authorities of the Government of Haiti, and to establish and maintain a secure and stable environment that will permit implementation of the Governor's Island Agreement" The Governor's Island Agreement had been signed on 3 July 1993 by President Jean Bertrand Aristide and Lieutenant General Raoul Cedras, the leader of a military coup that had wrested power from Aristide on 30 September 1991. That Agreement had committed the military junta to return Aristide to power by 30 October 1993. The junta's subsequent repudiation of the Governor's Island Agreement, massive flows of Haitian migrants toward U.S. shores, and a tense face-off with the United States, had led, on the brink of a forcible U.S. insertion of the 82d Airborne Division, to the Carter-Jonaissant agreement of 18 September 1994. More than two dozen other United Nations Security Council Resolutions and Security Council Presidential statements addressed specific portions of operations in Haiti.

Command and Control. Uphold Democracy was initially conducted under a chain of command that ran from the NCA to the Commander in Chief of Atlantic Command (ACOM) to Joint Task Force 180 (also the headquarters of Joint Task Force Somalia (also the headquarters of Combined Joint Task Force 180), which was commanded by an Army Lieutenant General. On 24 October 1995, CJTF 180 stood down, handing command of the MNF to the Commander of CJTF 190, an Army Major General. Special operations forces remained under command of ACOM (coordination with SOCOM). A United States Major General was force commander of UNMIH.

Doctrinal Category of Operation. Peace enforcement.

Military Name(s) of Operations. Uphold Democracy (19 September 1994 to 31 March 1995), UNMIH (31 March 1995 to 28 June 1996).

Sources. Center for Law and Military Operations, *Law and Military Operations in Haiti, 1994-1995* (Charlottesville, VA: CLAMO, 1995).

Macedonia

Number and Type of Troops/Units Deployed. The total strength of the military troop component in the Former Yugoslavia Republic of Macedonia (FYROM) is about 1,000. It consists of a composite Nordic mechanized infantry battalion, a United States mechanized infantry battalion (minus), and an Indonesian heavy engineering platoon. The U.S. battalion is not pure, because in order to permit some aviation assets to deploy and to meet the force cap (the United States furnishes only 300 of the 1000 troops), some of the battalion's organic infantry does not deploy.

Names of Units Deployed. After an initial deployment by 6th Battalion 502d Infantry of the Berlin Brigade, alternating battalions from the 3d Infantry Division (now the 1st Infantry Division) and the 1st Armored Division have served in Macedonia. In addition, there are about thirty-five United Nations military observers and about twenty-six United Nations civilian police monitors serving. The total number of civilian personnel serving is about 162. Civilian and military personnel are drawn from about forty nations.

Nature of Mission. Observe and report. The force operates twenty-four permanent observation posts along a 424-kilometer stretch on the Macedonia side of the border with the Federal Republic of Yugoslavia and Albania. It also operates about thirty-three temporary observation posts. Close to forty border and community patrols are conducted daily. Military observers complement the work of the battalions. On the strategic level, the Macedonia deployment sought and seeks to do four things: (1) address internal instability and any external threat to the integrity of Macedonia's territory; (2) stymie developments that might further undermine stability in the former Yugoslavia; (3) support the Organization for Security and Cooperation in Europe mission in Macedonia; and (4) meet a member state's request for assistance.

Time and Duration of Deployments. Deployments began in August of 1993. Rotations of the U.S. battalions last six months.

Area of Operations. A strip of land along the northern and western border of Macedonia about 425 kilometers in length and thirty-five kilometers miles in width. The U.S.

battalion observes and patrols along roughly a third of that area (the eastern portion, extending from Bulgaria to the portion of the border near Macedonia's capitol, Skopje).

International Legal Authority for Operation. The United Nations Protection Force (UNPROFOR) was established by Security Council Resolution 743 (21 February 1992) to address conflict throughout the former Yugoslavia. At the end of 1992, after fighting had spread throughout former Yugoslav republics of Croatia and Bosnia and tensions had mounted in the Serbian autonomous region of Kosovo, the leadership of Macedonia expressed concerns to the U.N. Secretary-General that fighting might spill over into that republic. The main concerns were Serbian intervention and the likelihood of Albanian involvement in Western Macedonia if conflict erupted in Kosovo. Macedonia had no credible armed forces since its secession from Yugoslavia. The U.N. and the United States felt that the situation in Macedonia could ignite and become another Bosnia, but with a greater international impact because of the potential involvement of Bulgaria, Albania, Greece, Turkey and Serbia. The Secretary General requested that UNPROFOR mount an exploratory mission to assess the practicability of a preventive deployment of peacekeepers in Macedonia. Resolution 792 (11 December 1992) authorized the Secretary General to establish UNPROFOR in FYROM. The Nordic and American forces forming the preventive deployment force (then called UNPROFOR) began operating in FYROM in August of 1993. Security Council Resolution 983 (31 March 1995) established the United Nations Preventive Deployment force (UNPREDEP) as a distinct operating entity.

Chain of Command. While the U.S. battalion is under the operational control of the U.N. FYROM Commander, a Nordic general officer headquartered in Skopje, it remains under combatant command of the United States. Initially the chain of command ran from Macedonia to the Commander of JTF Provide Promise in Naples (also the Commander in Chief of Allied Forces South of the North Atlantic Treaty Organization Command structure—a U.S. four star admiral) and to the Supreme Allied Commander Europe (also the Commander in Chief of European Command).

Doctrinal Category of Operation. Although the text of the paper refers to the deployment in Macedonia as "peacekeeping," Army doctrine and the United Nations refer to it more precisely as a "preventive deployment" that is a part of "preventive diplomacy." Whereas peacekeeping consists of "military or paramilitary operations that are undertaken with the consent of all major belligerents . . . [consisting of] monitor[ing] and facilitat[ing] implementation of an existing truce and support [to] diplomatic efforts to reach long-term political settlement," preventive diplomacy consists of "diplomatic actions taken in advance of a predictable crisis and aimed at removing the sources of conflict before violence erupts or to limit the spread of violence when it occurs." *Field Manual 100-23*, 112. Preventive diplomacy is an activity with a predominantly diplomatic lead, but the tactical mission for the mechanized infantry battalions is largely indistinguishable in terms of equipment, force posture, and activities from a peacekeeping

force. Still, the battalions are not implementing a formal peace agreement between the parties (FYROM and Serbia-Montenegro).

Military Names of Operations. Able Sentry. UNPREDEP

Sources. The United Nations, *The Blue Helmets: A Review of United Nations Peacekeeping*, 3d ed. (New York: UN Dept of Public Information, 1997), 564-66; Lieutenant Colonel Carter Ham, Commander, 1st Battalion, 6th Infantry, 3rd Infantry Division, deployed in Macedonia in 1994, interview by Major Kim R. Daniel, at Hohenfels Training Center, 18 August 1995, transcript 326th Military History Detachment records; Lieutenant Colonel Gene C. Kamena, Commander, 3rd Battalion, 12th Infantry, deployed in Macedonia in 1995, interview by Major Richard Thurston, 30 May 1996, in Baumholder, Germany, transcript 90th Military History Detachment records; Bo Wranger, "Preventive Diplomacy: Military Component," paper presented by UNPREDEP's Force Commander to the workshop An Agenda for Preventive Diplomacy: Theory and Practice, Skopje, October 1996; Alice Ackermann and Antonio Pala, "From Peacekeeping to Preventive Deployment: A Study of the United Nations in the Former Yugoslav Republic of Macedonia," in *European Security*, Vol.5, No.1, Spring 1996; *Field Manual 100-23*, 3.

Bosnia

Number and Type of Troops/Units Deployed. An advance force of 2,600 troops began deploying to Bosnia and Croatia on 2 December 1995. The number would swell to some 60,000 Implementation Force (IFOR) troops in the coming months. Roughly half of these would be U.S. forces, consisting of an entire Armored Division, augmented with substantial combat, combat service support, and command and control elements. Following transfer of authority from IFOR to the Stabilization Force (SFOR) on 20 December 1996, the size of the force eventually was reduced by half, and the size of the U.S. contribution shrank from a reinforced division to about the size of a brigade (plus). Other nations contributing forces included the member states of NATO, as well as Russia and several other non-NATO countries.

Names of Units Deployed. The principal U.S. combat force deployed with IFOR was the 1st Armored Division. Numerous combat support and combat service support units throughout Europe and the world also deployed. The U.S. contribution to SFOR initially consisted of the 1st Infantry Division, which has since been replaced by elements of the 1st Armored Division. The 1st Cavalry Division is scheduled to assume the SFOR mission from the 1st Armored Division in 1998.

Nature of Mission. The military tasks assigned to IFOR under the General Framework Agreement consisted of ensuring continued compliance with the cease-fire, ensuring the withdrawal of forces from the agreed cease-fire zone of separation back to their

respective territories, ensuring the separation of forces, ensuring the collection of heavy weapons into cantonment sites and barracks and the demobilisation of remaining forces, creating conditions for the safe, orderly and speedy withdrawal of UN forces that had not transferred to the NATO-led IFOR, and controlling the airspace over Bosnia-Herzegovina. Early missions at the tactical level also included the conduct of Joint Military Commissions, the establishment of checkpoints, security patrols, and clearance of mines along major routes. More recent missions have included the security of election sites and other tasks associated with restoring normal civic and economic activity in the war-ravaged territory.

Time and Duration of Deployments. The 1st Armored Division's deployment that began in December of 1995 lasted a year, as did that of the 1st Infantry Division that began in December of 1996.

Area of Operations. The Republic of Bosnia and Herzegovina is about 19,541 square miles in size. IFOR and SFOR have operated throughout the country, which is divided roughly into thirds. The United States divisional task force has operated in the northeastern third (the area around Tuzla and including the hotly disputed Brcko corridor), the divisional task force headed by the French in the south, and that headed by the United Kingdom in the west. Sizable combat service support elements and training facilities are located in Hungary.

International Legal Authority for Operation. The General Framework Agreement for Peace in Bosnia and Herzegovina, initialed in Dayton on Nov. 21, 1995 and signed in Paris on 14 December 1995 by representatives of the Republic of Bosnia and Herzegovina, the Republic of Croatia, and the Federal Republic of Yugoslavia is the core legal authority for the deployment. United Nations Security Council Resolution 1031 (15 December 1995) authorized IFOR's mission. The North Atlantic Council (NATO's governing body) approved IFOR's deployment on 16 December 1995. On 20 December 1996, IFOR had successfully completed its mission. Hostilities had ceased and the factions' military forces had been separated and moved into cantonments. Yet it was clear that much remained to be done on the civilian side and that the environment would be too instable and insecure to continue civilian implementation without an international military presence. Based on planning by the NATO Military Authorities—and following the establishment of a two-year Civilian Consolidation Plan in Paris and its elaboration in London under the auspices of the Peace Implementation Council—NATO Foreign and Defence Ministers determined that a reduced military presence was needed to provide the stability necessary for the consolidation of peace. They agreed that NATO should organize a Stabilisation Force (SFOR), which was subsequently activated on 20 December 1996.

Command and Control. Operation Joint Endeavour was NATO-led under the political direction and control of the Alliance's North Atlantic Council, as required by Annex 1A

of the General Framework Agreement. The command structure of IFOR was unified. Overall military authority lay with NATO's Supreme Allied Commander Europe (SACEUR), General George Joulwan. General Joulwan designated Admiral Leighton-Smith (NATO's Commander in Chief Southern Command - CINCSOUTH) as the first Commander in Theatre of IFOR (COMIFOR). Admiral Smith in July of 1996, and Admiral Joseph Lopez was appointed as CINCSOUTH and COMIFOR. In November 1996, when IFOR Headquarters was transferred from CINCSOUTH to CINCLANDCENT, General Crouch became COMIFOR, and eventually COMSFOR. The United States division task force is under the operational control of a non-U.S. Lieutenant General who commands the Allied Rapid Reaction Corps (ARRC), which is headquartered in Sarajevo.

Doctrinal Category of Operation. Peace enforcement.

Military Name(s) of Operations. Joint Endeavor (IFOR). Joint Guard (SFOR).

Sources. North Atlantic Treaty Organization, Basic Fact Sheet No. 4—NATO's Role in Bringing Peace to the Former Yugoslavia, March 1997, available at <http://www.nato.int/docu/facts/bpfy.htm>; Internet; accessed 29 April 1998; Center for Army Lessons Learned, *Operation Joint Endeavor, Initial Impressions Report, Bosnia-Herzegovina: Task Force Eagle Initial Operations* (Fort Leavenworth: CALL, May 1996).

[Note: this summary of operations in Bosnia intentionally omits discussion of the several other United Nations and NATO operations in and around the Former Yugoslavia and addresses only the NATO Implementation Force and subsequent Stabilization Force, in which the majority of U.S. Army forces have served].

APPENDIX B

EXCERPTS FROM INDIVIDUAL AND UNIT TASKS

Excerpt 1

From Headquarters, Department of the Army, *ARTEP 71-2-MTP—Mission Training Plan For The Tank And Mechanized Infantry Battalion Task Force*. Washington, DC, 3 October 1988:

Task: Defend (7-1-3009)

Condition: The TF defends in the forward portion of the MBA. A covering force forward of the TF gives the TF early warning. The covering force withdraws. The enemy performs reconnaissance, breaching, and infiltration to prepare for the attack. The enemy attacks with an MRB(+). Note: This task may be a battle position defense or defense in sector, depending upon METT-T factors.

Standard:

- a. The TF is prepared to defend at the time prescribed.
- b. The enemy MRR is defeated forward (50 percent or more destroyed, wounded, or captured) forward of the battalion rear boundary.
- c. The TF performs the defense IAW the brigade commander's intent for coordination with adjacent TFs.
- d. There is no penetration of rear boundary by an MRC(+) or more. Ee. TF sustains less than 30 percent casualties.

Task Steps And Performance Measures (Go/No Go)

- *1. TF commander and staff plan the defense and issue an OPORD that—
 - a. Identifies engagement areas along each approach where the enemy is most vulnerable. It provides for positions, weapons, and obstacles to destroy the enemy in those areas.
 - b. Breaks up the enemy formation to expose him to flanking fires from multiple directions and to not allow him to fight a linear battle.

- c. Uses full depth of the sector consistent with the brigade commander's concept for synchronization with adjacent TF.
- d. Uses displacement for subsequent positions, which are planned and coordinated with obstacles and covering fire.
- e. Blocks or slows the enemy on all likely mounted and dismounted approaches with enough defending forces and obstacles to allow maneuver forces to mass on the approaches being used.
- f. Provides for flexibility by having depth and contingency plans for shifting fires or counterattacks to mass forces on approaches the enemy actually uses. Identifies decision points to allow initiation of maneuver. Gives the engagement criteria, firing priorities, or engagement priorities.
- g. Has security forces on all approaches sufficient to detect any enemy. Covers the decision point when TF takes over the battle handover line responsibilities.
- h. Positions antiarmor weapons in depth for flanking fires, defilade positioning, and promoting maneuvers against the enemy. Areas assigned should be large enough for positioning.
- i. Contains a specific task list for mobility, countermobility, and survivability tasks.
- j. Positions infantry to push the enemy into engagement areas and to provide protection for antiarmor weapons and obstacles. Infantry is not positioned where it can be engaged by standoff fires or overrun by mounted assault. Infantry with artillery blocks or secures dismounted approaches and mounted infiltration routes. Designates a trigger line and disengagement criteria.
- k. Uses obstacles with defending maneuver forces to turn, slow, and canalize the enemy into areas where he is vulnerable to antiarmor fires.
- l. Has sufficient fire control measures to mass and distribute direct fires on the enemy formations.
- m. Provides for the defeat of enemy reconnaissance. Security forces are deployed forward, reaction forces designated and local security coordinated.
- n. Avoids obvious positioning in concept of the defense.

- o. Uses supporting fires to strike the enemy where he is slowed or stopped and against his formations and forces that are vulnerable and critical. Where these fires do not obscure direct fires (normally, overwatching ATGM supporting fires are used).
 - p. Positions ADA to protect preparations and maneuver.
 - q. Provides the priority of fires for fire support.
 - r. Provides the priority of engineer work.
 - s. Requests CAS from brigade and plans their employment.
 - t. Provides for emergency resupply/ movement of forces by helicopter/vehicles.
- +2. Battalion TF prepares the defense.
- a. TF priorities of work are completed.
 - b. Fighting positions are prepared for all personnel, vehicles, and weapons systems.
 - c. Movements are reconnoitered and rehearsed.
 - d. Fire plans and sector sketches are prepared.
 - e. All required obstacles are properly emplaced.
 - f. Preparations do not disclose defensive concept to enemy.
- +3. TF defeats the enemy reconnaissance and infiltration, and performs surveillance.
- a. Enemy reconnaissance cannot observe the occupation and setup of the defense.
 - b. Enemy commander does not determine the friendly scheme of defense. The enemy fire plan cannot suppress the defense.
 - c. No friendly obstacles are breached before the enemy attack.
 - d. Security elements are far enough out to provide a 10-minute warning to the TF of the arrival of the enemy attack.

- e. Security element can detect and track the movement of the enemy second echelon.
- +4. TF defeats the attack.
- a. The enemy MRR is defeated forward of the TF rear boundary. There is no MRC or larger penetration of the TF rear boundary.
- b. TF performs the defense IAW the brigade commander's intent for coordination with adjacent battalions. Movements do not uncover adjacent battalion.
- c. TF has at least 70 percent personnel and equipment after consolidation and reorganization, and it can continue its mission.

* Indicates a leader task.

+ Indicates a critical task.

Excerpt 2

From Headquarters, Department of the Army, *ARTEP 71-1-MTP—Mission Training Plan For The Tank And Mechanized Company and Company Team*. Washington, DC, 3 October 1988:

Task: Defend (17-2-1021)

Condition: The enemy is expected to attack mounted or dismounted with forces up to battalion-level strength supported by attack helicopters, indirect fire, and close air support. The enemy can be reinforced with up to company-size units. The company team is defending battle positions as part of a battalion sector defense or is assigned a separate sector.

Standard: The company team completes all preparations directed by the commander, not later than the time specified in the order. The company main body is not surprised by the enemy. The company team decisively engages the enemy. The company team destroys, blocks, delays for the specified time, and canalizes the enemy into the designated area. The company team denies and prevents penetration of specified boundary or terrain. The company team sustains no more than 30-percent friendly casualties and inflicts no less than 50-percent casualties on the enemy.

Task Steps And Performance Measures (Go-No Go)

- +*1. The commander develops a defense plan. (See T&EO 17-2-0101, Prepare for Combat, this MTP.)
- a. The commander identifies enemy avenues of approach and areas of weakness along each approach (exposure, canalization, slow movement).
 - b. Platoons and obstacles are positioned to defeat enemy along all approaches at locations of weakness.
 - c. Contingencies are made to shift fires and forces to any route being used by enemy (supplementary positions and secondary sectors of fire).
 - d. Fire control measures are developed to allow fires to be shifted and masses (engagement areas, sectors of fire, TRPs).
 - e. Tank/TOW positions are selected to provide flanking fires on enemy approaches, provide cover, and allows covered entry/exit.
 - f. Infantry positions are selected to block enemy mounted/dismounted approaches, where infantry is not exposed to standoff fires and protected by obstacles from mounted assault.
 - g. Obvious positions are avoided.
 - h. Coordinates the synchronization of the fire support plan, obstacle plan, initiation of direct fire and counterattack plan.
 - i. Establishes control measures identifying sectors, boundaries, battle positions, engagement areas, and withdrawal routes.
 - j. The commander and FIST develop a fire support plan, including TRPs and preplanned targets forward, within and behind the battle position.
 - k. Plan for the occupation of the defense positions.
 - l. Plan work priorities, if not SOP.
 - m. Develop a security and counter-reconnaissance plan.
 - n. Request engineer support and barrier material.
2. Company team occupies an assembly area short of the FEBA, IAW T&EO 17-2-0325, Occupy an Assembly Area, this MTP.

- a. Reconnaissance personnel provide sketches of the BP, tentative weapon sites, and TRPs.
- +*3. The leader's reconnoiter the defensive position.
- a. The commander conducts a leader's reconnaissance with key company leaders.
 - b. Reconnaissance personnel provide sketches of the BP, tentative weapon sites, and TRPs.
 - c. The commander confirms or modifies his plan, based on the reconnaissance.
- +4. The company occupies the defense.
- a. Vehicles travel along preselected covered and concealed positions.
 - b. Vehicles do not stop, until reaching the battle position guides.
 - c. Platoons occupy IAW T&EO 7-3/4-1021, ARTEP 7-8-MTP and T&EO 17-3-0227, ARTEP 17-237-10-MTP.
 - d. The company elements establish their defensive positions.
 - e. Establish unit security.
 - f. Emplace Ops and air guards.
 - g. Patrol areas, that cannot be observed.
 - h. Emplace early warning devices (PEWs).
 - i. Conduct stand-to per SOP or order.
 - j. Position primary weapon systems and establish fields of fire.
 - k. Camouflage positions, using natural cover, when available.
 - l. Reconnoiter alternate and subsequent battle positions.
 - m. When possible, occupation is checked from enemy direction.
 - n. All infantry is in fighting position, with overhead cover within two hours.

- o. All vehicles have covered positions.
- p. The enemy cannot spot any position from expected engagement areas.
- q. Rehearsals are conducted and checked by leaders from enemy's direction.

*5. Leaders check positions.

- a. Key leaders and their subordinates go to the front of their positions, and walk the terrain, to determine if the positions accomplish their assigned tasks.
- b. Leaders walk positions and adjust for more effective fields of fire.
- c. Positions and fields of fire are checked for dead space.

6. Units improve the defense.

- a. Improve alternate and supplementary positions.
- b. Establish responsibility for overlapping fires on enemy avenues of approach.
- c. Designate and rehearse counterattack plans.
- d. Dig communications trenches between positions.

*7. Commander positions the company combat trains.

- a. Position the company combat trains, one terrain feature behind the company team, if applicable.
- b. Ensure they are close enough to provide rapid support.
- c. Ensure they are close enough to coordinate Class III and V prestocks.

*8. Company team commander finalizes fire plan.

- a. Constructs the company team fire plan from consolidated platoon data.
- b. Achieves mutual support and concentration of fires. (See T&EO 17-2-0402, Employ Indirect Fire in the Defense, this MTP.)
- c. Ensures company is tied in with other companies.

- d. Provides copy to the battalion task force CP.
9. Unit leaders coordinate with adjacent, supporting, co-located, and higher units.
- a. Exchange information on routes into and out of the battle positions and routes back to the subsequent battle position.
 - b. Identify and coordinate indirect-fire targets and control measures.
 - c. Coordinate location of primary, alternate, and supplementary battle and firing positions and location of flanks.
 - d. Exchange the location of Ops and patrol routes, along with dead space between units and how it's to be covered.
 - e. Exchange necessary CEOI information.
 - f. Identify overlapping direct fire.
10. The company team emplaces minefields and obstacles. (See T&EO 17-2-0502, Emplace an Obstacle, this MTP.)
- a. Units cover obstacles by observation and direct and indirect fires.
 - b. The commander requests and receives clearance to lay protective minefields.
 - c. When available, plans the use of scatterable mines to close gaps.
 - d. In built up areas, emplaces obstacles to deny enemy underground approaches through and between buildings and over rooftops.
11. The unit stockpiles ammunition and supplies.
- a. Stockpiles overhead cover for supplies.
 - b. Provides sufficient overhead cover for supplies, as well as individual defensive positions.
 - c. Reports locations to all elements.
 - d. Plans for the evacuation or destruction of supplies.

+12. The company team conducts defensive operations.

- a. Conducts counter-reconnaissance to force the withdrawal or destruction of enemy reconnaissance and security elements.
- b. The unit conducts rest plan and sustainment activities for continuous operations. (See T&EO 7-3/4-1058, ARTEP 7-8-MTP.)
- c. The unit maintains continuous communications with the battalion CP and reports status, as per order or unit SOP.
- d. The company team forwards defensive sector sketch and minefield reports to the battalion CP and updates them, as needed.
- e. The company team reports enemy activity to the battalion CP, per order or SOP.

+13. The company team defends against a mounted assault. (See T&EO 7-3/4-1021, ARTEP 7-8-MTP.)

- a. Uses direct and indirect fire to separate the tanks from infantry fighting vehicles providing security for the vehicles.
- b. Executes the company barrier plan to impede and canalize the vehicles.
- c. Employs smoke to obscure enemy vision.
- d. Engages the vehicles with primary weapon systems command-detonated mines, demolitions, and antiarmor weapons.
- e. Platoons defend, in accordance with T&EO 7-3/4-1021, ARTEP 7-8-MTP, and T&EO 17-3-0225, ARTEP 17-237-10-MTP.
- f. The commander moves elements between primary, alternate, and supplementary positions, to complete the destruction or expulsion of the enemy force.
- g. Tanks engage targets by priority, based on SOP or commander's guidance.
- h. Engage tanks with flank or rear shots, when possible.
- i. Armored vehicle crews fight buttoned up.

*14. The company team defends against a dismounted enemy assault.

- a. The commander orders direct and indirect FPFs to suppress, block, and destroy dismounted enemy troop formations.
 - b. The company executes the company barrier plan to impede and canalize the troops into planned fires.
 - c. Infantry defend, in accordance with T&EO 7-4-1021, ARTEP 7-8-MTP.
 - d. Armored vehicles exploit enemy vulnerability, when the enemy is dismounted.
15. Company team counterattacks by fire and maneuver to finish destruction of enemy or recapture key terrain.
- a. The counterattack is launched before the enemy can consolidate.
 - b. Strikes the enemy on flank.
 - c. Is synchronized with all combat power of company team.
16. The company team consolidates and reorganizes, IAW 17-2-0704, ARTEP 17-237-10-MTP.
17. The company team continues to defend.
- a. The defense continues until the enemy withdraws completely from the area.
 - b. On order, the company team continues the mission, in accordance with the commander's intent.
 - c. The company team is ordered to attack or withdraw.

* Indicates a leader task.

+ Indicates a critical task.

Excerpt 3

From Headquarters, Department of the Army, *ARTEP 17-237-10-MTP—Mission Training Plan For The Tank Platoon*. Washington, DC, 3 October 1988.

Task: Execute A Platoon Defensive Mission (17-3-0225)

Condition: The platoon has completed its occupation of a BP as part of a company team defense. The plt ldr receives a spot report from the commander, an adjacent platoon, one of the platoon's members, or its OP alerting him to, or personally observes, an advancing Threat tank or motorized rifle company.

Standard: The platoon executes the defensive mission and is able to destroy or halt the Threat force or begin displacement to a subsequent BP before being overrun or bypassed by the Threat force in its sector of fire. No more than one tank or tank crew is lost as a result of hostile fire.

Task Steps And Performance Measures (Go No Go)

- *1. The ldr informs the commander of, or acknowledges, the spot report, as applicable.
MQS (01-5700.01-0001)
 - a. If the report came from within the platoon, the plt ldr immediately verifies the information and sends it as a spot report to the company team commander.
 - b. If the report came from the commander or an adjacent element, the plt ldr acknowledges the report.
- *2. The plt ldr analyzes the spot report.
 - a. Determines the size of the Threat.
 - b. Plots the location of the Threat force on his map.
 - c. Determines direction of the Threat force's movement and its speed.
 - d. Determines the avenues of approach the Threat may use to enter the platoon's sector and company's engagement area (EA).
 - e. Determine the approximate time the Threat will hit the platoon's trigger point.
- *3. The plt ldr disseminates the situation report.
 - a. Notifies each tank commander and OP with a situation report that includes all of the information from the commander and the plt ldr's analysis.
- +*4. The plt ldr takes immediate action to prepare the platoon to engage the Threat.
 - a. Directs the platoon to remain in hide positions until the OP identifies smoke, dust columns, sounds of the Threat approaching.

- b. When notified by the OP, the plt orders the platoon using hand-and-arm signals or hot loop to start up simultaneously and move to turret-down positions.
 - c. Plt ldr orders Ops to withdraw back to and mount their tanks.
- +5. The platoon moves into turret-down positions, scans its sector, prepares to engage, and reports.
 - a. Platoon moves simultaneously into turret-down positions.
 - b. TCs, gunners, and loaders scan for Threat targets.
 - c. TCs alert the platoon when they are the first to identify Threat targets, giving size, direction, and range to the Threat, as a minimum.
- +*6. The plt ldr issues a preparatory platoon fire command. MQS (01-1242.00-0001)
 - a. Orders the engagement by specifying alert (who is to engage), ammunition or weapon (optional), description and number of targets, location, fire pattern or technique (optional), and execution (i.e. "at my command, ready report").
- 7. Each tank crew prepares to engage.
 - a. Tank commanders lay main guns for direction.
 - b. Tank commanders immediately issue fire commands to crews, specifying "at my command."
 - c. Loaders load specified ammunition and prepare specified weapons.
 - d. Tank commanders orient gunners on proper targets.
 - e. Tank commanders report when ready to engage.
- *8. Plt ldr informs the commander of the Threat sighted and requests indirect fires. MQS (01-1242.00-0001)
 - a. Plt ldr sends a complete spot report to the commander.
 - b. Plt ldr requests indirect fires on the Threat force as it closes in accordance with the defensive fire plan in the OPORD.

- +9. The platoon executes fires when the Threat crosses the trigger point.
- a. Plt ldr orders the platoon into hull-down positions and orders "fire" when the OPORD's engagement criteria are met.
 - b. The platoon immediately moves into hull-down positions simultaneously and fires on order.
 - c. The platoon engages targets in its sector using the specified fire technique and pattern.
 - d. Individual tanks move to alternate firing positions when TCs determine accurate antitank fires are being received.
 - e. The plt ldr and PSG coordinate their sections' move to alternate positions so only one vehicle per section moves at a time.
 - f. Plt ldr issues additional fire commands as necessary to destroy all Threat forces in the EA, while controlling overkill and ammunition expenditure.
 - g. Plt ldr directs all or part of the platoon to move to supplementary firing positions, as necessary, to destroy Threat moving through a different sector of fire or avenue of approach.
10. When the Threat has been destroyed or halted, the platoon continues to defend from its present location.
- a. Plt ldr directs the platoon back into turret-down positions.
 - b. The platoon moves to turret-down positions, and TCs and gunners scan for additional Threat targets.
 - c. Plt ldr sends a complete spot report to the company team commander.
- +11. If the Threat force advances in sufficient strength to meet the company team OPORD's disengagement criteria, the platoon displaces to its subsequent battle position (as applicable to the company team's scheme of maneuver).
- a. Plt ldr sends a spot report to the commander that includes the number and types of vehicles that are crossing the "break point " and requests permission to displace to its subsequent BP.
 - b. Requests final protective fires, if scheduled.

- c. Takes directions to continue to fight without displacement, displace without overwatching fires, or displace with overwatch by another unit, as ordered by the commander.

12. If follow-on Threat forces are identified, the platoon continues to defend.

- a. The plt ldr directs each tank commander to back down to turret-down, optics-up position, and shut down engines.
- b. The platoon moves to turret-down positions.
- c. The platoon leader issues a simultaneously shutdown signal, either visually or by radio, so the platoon can listen for advancing Threat.

* Indicates a leader task.

+ Indicates a critical task.

SUPPORTING OFFICER'S TASKS 01-1242.00-0001 Conduct the Occupation and Defense of a Battle Position at Platoon Level 01-5700.01-0001 Communicate on a Tactical Radio

Excerpt 4

From Headquarters, Department of the Army, *Soldier's Manual STP 17-19K1-SM—MOS 19K M1/M1A1/M1A2 Abrams Armor Crewman Skill Level 1* Washington, DC, 1 November 1994:

Task: Troubleshoot the 120mm Main Gun on an M1A1/M1A2 Tank (171-126-1068 19K)

Conditions: In a field/garrison environment, given a M1A1/M1A2 tank, with BII, crew members, and TM 9-2350-264-10-2, w/c3, TM 9-2350-288-10-2, w/c3, LO 9-2350-264-12, DA Form 2404, CLP, clean rags, FRH, 120mm round. A malfunction of the main gun is observed.

Standards:

1. Malfunction is isolated and identified.
2. Any crew-level malfunction is corrected.

3. Any malfunction that cannot be corrected at crew level is reported on DA Form 2404. 44. All safety precautions are observed to prevent injury to personnel and damage to equipment.

Training And Evaluation:

1. Verify the fault.
2. Locate the troubleshooting section of the TM.
3. Locate the problem by using the troubleshooting index.
 - a. Driver's warning and caution lights.
 - b. Commander's warning lights.
 - c. Driver's indicator lights.
 - d. Commander's indicator lights.
 - e. Gunner's indicator lights.
 - f. Loader's indicator lights.
 - g. Driver's gages and meters.
 - h. Engine.
 - i. Transmission.
 - j. Brakes.
 - k. Driving lights and dome-lights.
 - l. Tank electrical power.
 - m. Fire control.
 - n. Main gun.
 - o. Machine guns.
 - p. Fixed fire extinguisher system.

- q. Ammunition compartment.
 - r. Auxiliary systems.
 - s. M1A2: Interim systems.
4. Locate the proper troubleshooting procedure and page number and turn to it.
 5. If breechblock does not close, perform the following steps:
 - a. Check for obstruction in breech.
 - b. Check that round is properly seated.
 - c. If round is not properly seated, insert breechblock operating handle and ensure breechblock is locked open and seat round.
 - d. If round will not seat, remove round. If round is properly seated, do step e.
 - e. Use manual breechblock closing lever to close breechblock.

6. If breechblock will not open fully after recoil, perform the following steps:

WARNING: Manual opening of the breechblock after firing a round may result in a flareback of gases into the turret. To prevent flareback, open breechblock using emergency procedures.

- a. Perform emergency procedure for opening 120mm breechblock.
 - (1) Start engine.
 - (2) Close all open hatches.
 - (3) Close drain valves.
 - (4) Make sure driver's and loader's periscopes are installed.
 - (5) Make sure commander's and gunner's periscopes are installed.
 - (6) Turn on NBC main system.
 - (7) Wait 2 minutes for crew compartment to pressurize.

WARNING: Do not handle spent stub base without using heat protection mittens, hands will get burned from hot spent stub base.

- (8) Open breechblock manually. Pressurization will force gases out muzzle.
- b. Look for damage to breechblock.
- 7. If breechblock opens too fast or too slow after recoil, adjust operating cam as needed.
- 8. If 120mm gun stub base will not extract, perform the following steps:
 - a. Remove the stuck stub base.
 - b. Check for dirt and debris in gun chamber.
 - c. Check stub base extractors on breech operating mechanism.
 - d. Adjust operating cam as needed.
 - e. If operating cam adjustment is okay, notify unit maintenance.
- 9. If 120mm gun returns to battery with excessive shock, perform the following steps:
 - a. Check replenisher fluid level.
 - b. If replenisher fluid is okay, notify unit maintenance.
- 10. If flareback of burning gas into turret after firing main gun, perform the following steps:
 - a. Verify that bore evacuator is not damaged (punctured, dented, or cracked).
 - b. Verify that bore evacuator is properly assembled to the gun tube.
 - c. Verify that the breechblock opening mechanism is operating properly.
-

Evaluation Guide [Performance Measure Results—Pass or Fail on each item]

- 1. Verify the fault.
- 2. Locate the troubleshooting section of the TM.

3. Locate the problem by using the troubleshooting index.
4. Locate the proper troubleshooting procedure and page number and turn to it.
5. If breechblock does not close, perform the following steps:
 - a. Check for obstruction in breech.
 - b. Check that round is properly seated.
 - c. If round is not properly seated, insert breechblock operating handle and ensure breechblock is locked open and seat round.
 - d. If round will not seat, remove round. If round is properly seated, do step e.
 - e. Use manual breechblock closing lever to close breechblock.
6. If breechblock will not open fully after recoil, perform the following steps:
 - a. Perform emergency procedure for opening 120mm breechblock.
 - b. Look for damage to breechblock.
7. If breechblock opens too fast or too slow after recoil, adjust operating cam.
8. If 120mm gun stub base will not extract, perform the following steps:
 - a. Remove the stuck stub base.
 - b. Check for dirt and debris in gun chamber.
 - c. Check stub base extractors on breech operating mechanism.
 - d. Adjust operating cam.
 - e. If operating cam adjustment is okay, notify unit maintenance.
9. If 120mm gun returns to battery with excessive shock, perform the following steps:
 - a. Check replenisher fluid level.
 - b. If replenisher fluid is okay, notify unit maintenance.

10. If flareback of burning gas into turret after firing main gun, perform the following steps:

- a. Verify that bore evacuator is not damaged (punctured, dented, or cracked).
- b. Verify that bore evacuator is properly assembled to the gun tube.
- c. Verify that the breechblock opening mechanism is operating properly.

Feedback: Score the soldier GO if all task steps are passed (P). Score the soldier NO-GO if any steps are failed (F). If soldier scores NO-GO, show him what was done wrong and how to do it correctly.

Excerpt 5

From Headquarters, Department of the Army, *Soldier's Manual STP 17-19K23-SM—MOS 19K M1/M1A1/M1A2 Abrams Armor Crewman Skill Level 2/3* Washington, DC, 15 December 1994:

Task: Troubleshoot Fire Control System on an M1A2 Tank (171-126-1115 19K)

Conditions: In a field/garrison environment, given M1A2 tank, basic issue items (BII), DA Form 2404, clean rags, and appropriate TM and LO. The TURRET POWER switch is on; fault light/message received indicating a malfunction in the fire control system.

Standards:

1. Fault message/light is no longer displayed and deficiencies are corrected.
2. Any deficiency not corrected is reported to unit maintenance on DA Form 2404.
3. All safety precautions are observed to prevent damage to equipment and injury to personnel.

Training and Evaluation

1. Verify the fault.
2. Locate the troubleshooting section of the TM.
3. Locate the problem by using the troubleshooting index.

- a. Driver's warning and caution lights.
 - b. Commander's warning lights.
 - c. Driver's indicator lights.
 - d. Commander's indicator lights.
 - e. Gunner's indicator lights.
 - f. Driver's gages and meters.
 - g. Engine.
 - h. Transmission.
 - i. Brakes.
 - j. Driving lights and dome lights.
 - k. Tank electrical power.
 - l. Fire control.
 - m. Main gun.
 - n. Machine guns.
 - o. Fixed fire extinguisher system.
 - p. Ammunition compartment.
 - q. Auxiliary systems.
 - r. Interim symptoms.
4. Locate the proper troubleshooting procedure and page number and turn to it.
5. Observe that the turret does not traverse and main gun does not elevate or depress using commander's control handle assembly and the gunner's handles work OK, perform the following steps:

- a. Check electrical connector on commander's handle.
 - b. If electrical connector is loose, tighten it.
 - c. If electrical connector is not loose, notify unit maintenance.
6. Observe that commander and gunner cannot fire main gun from control handles, perform the following steps:
 - a. Check that vehicle is not in DIAGNOSTICS mode.
 - b. Check that fire control system is not in BORESIGHT, ZERO, MRS, or TEST modes.
 - c. Check that gun and turret are not in travel lock.
 - d. If steps a through c are OK, notify unit maintenance.
7. Observe that the main gun rounds do not hit target using gunner's primary sight daylight sight, perform the following steps:
 - a. Check that proper AMMO SELECT pushbutton on gunner's primary sight has been pressed.
 - b. Check that proper AMMO SUBDES has been selected on gunner's control and display panel.
 - c. Perform fire control system test.
 - (1) If test status is GO, go to step 4.
 - (2) If test status is NO-GO, notify unit maintenance.
 - d. Press METRL DATA pushbutton on gunner's control and display panel.
 - e. Check for correct readings for AIR TEMP, AMMO TEMP, and BARO PRESS.
 - f. Check that CROSSWIND is in AUTO mode.
 - g. Check that displayed crosswind values appear reasonable for existing wind conditions.
 - (1) If crosswind values appear reasonable, go to step 8.

- (2) If crosswind values do not appear to represent existing winds, enter manual input for crosswind and continue operation. Notify unit maintenance when operation is complete.

h. Press RETURN pushbutton on gunner's control and display panel.

i. Press SENSORS pushbutton on gunner's control and display panel.

j. Press ATTD pushbutton on gunner's control and display panel.

- (1) If PITCH ROLL pushbutton is pressed for on, perform Hull/TURRET ZERO ADJUSTMENT, and go to step 14.

- (2) If PITCH ROLL pushbutton is pressed for off, go to step 11.

k. Check that CANT is in AUTO mode.

l. Place gunner's quadrant on the forward and top section of breech and measure trunnion cant.

- (1) When looking at the breech from inside the turret, do the following:

- (a) Place the gunner's quadrant on the forward top section of the breech just to the right of the front machined pad. The quadrant is to be placed so that it is parallel to the gun trunnion.

- (b) If the tank is canted to the left, go to step b.

- (c) Make sure the 0 to 800 MILS scale is facing the user, and the LINE OF FIRE arrow for the 0 to 800 MILS scale is pointing to the left.

- (d) Go to step c.

- (2) Make sure the 800 to 1600 MILS scale is facing the user, and the LINE OF FIRE arrow for the 800 to 1600 MILS scale is pointing up.

- (3) Make a coarse adjustment by moving the arm on the gunner's quadrant so that the bubble in the level is roughly centered between the sets of red lines on the level.

- (4) Fine tune the measurement by turning through KNOB on the gunner's quadrant micrometer clockwise or counterclockwise until the bubble is centered between the red sets of lines on the level.
 - (5) Read the value indicated on the 0 to 800 MILS scale. Read the value from the micrometer scale. Add the two values. This result is the trunnion cant in MILS.
 - (6) Obtain the CANT value from the GCDP. Multiply the value by 17.77 to convert degrees to MILS.
 - m. Verify that cant value displayed on GCDP is within ± 0.5 degrees (9 mils) of gunner's quadrant reading. If not, enter manual value for CANT and continue operation. Notify unit maintenance when operation is complete.
 - n. Perform fire control accuracy check.
8. Perform the following if TIS does not work.
- a. Make sure FLTR/CLEAR/SHTR switch is set to SHTR.
 - b. Make sure right (THERMAL) ballistic door is open.
 - c. Make sure UNIT TEST PATTERN switch is set to OFF.
 - d. Check FAULT light.
 - (1) If FAULT light is lit, notify unit maintenance.
 - (2) If FAULT light is not lit, go to step e.
 - e. Adjust CONTRAST and SENSITIVITY controls.
 - (1) If thermal image appears, continue mission.
 - (2) If thermal image does not appear, notify unit maintenance.
9. Perform the following when the tank has erratic tracking of turret in normal and/or emergency mode.
- a. Check turret lock.
 - (1) If turret lock is fully unlocked, go to step b.

- (2) Place turret lock fully in unlocked position.
 - b. Check inside of turret for foreign object jammed between turret and hull ring gear.
 - (1) If no foreign objects inside turret are interfering with turret rotation, go to step c.
 - (2) Move objects away from hull ring gear that might interfere with turret rotation.
 - c. Check hydraulic system oil reservoir oil level.
 - (1) If hydraulic system oil reservoir oil level is OK, go to step d.
 - (2) If hydraulic system oil reservoir oil level is low, add oil.
 - d. Perform hydraulic zero pressure check.
 - (1) If any faults are found, notify unit maintenance.
 - (2) If no faults are found, go to step e.
 - e. Check turret/hull junction on outside of tank for foreign objects.
 - (1) If no foreign material is found in turret/hull junction on outside of tank, go to step f.
 - (2) Remove rocks, sticks, or other foreign material jammed between turret/hull junction.
 - f. Bleed air from traverse hydraulics.
10. Perform the following if the main gun and turret do not move in normal and/or emergency mode, hydraulic pressure gage shows between 1500 psi and 1750 psi.
- a. Make sure turret lock is unlocked.
 - b. Make sure gun travel lock is unlock.
 - c. Make sure GUN/TURRET DRIVE switch on loader's panel is set to POWERED.

- d. Check turret/hull junction and turret/gun shield junction for foreign objects.
 - (1) If turret/hull junction or turret/gun shield junction is jammed, clear foreign object.
 - (2) If both turret/hull junction and turret/gun shield junction are clear, notify unit maintenance.
- 11. Verify that problem is corrected: Check that fault message light no longer appears.
- 12. Annotate uncorrected faults on DA Form 2404.

Evaluation Guide (Performance Measure Results—Pass or Fail on each item)

- 1. Verify the fault.
- 2. Locate the troubleshooting section of the TM.
- 3. Locate the problem by using the troubleshooting index.
- 4. Locate the proper troubleshooting procedure and page number and turn to it.
- 5. Observe that the turret does not traverse and main gun does not elevate or depress using commander's control handle assembly and the gunner's handles work okay.
- 6. Observe that commander and gunner cannot fire main gun from control handles.
- 7. Observe that the main gun rounds do not hit target using gunner's primary sight daylight sight.
- 8. TIS does not work.
- 9. Tank has erratic tracking of turret in normal and/or emergency mode.
- 10. Main gun and turret do not move in normal and/or emergency mode, hydraulic pressure gage shows between 1500 psi and 1750 psi.
- 11. Verify that problem is corrected. Check that fault message light no longer appears.
- 12. Annotate uncorrected faults on DA Form 2404.

APPENDIX C

SURVEY INSTRUMENT

Master of Military Arts and Sciences (MMAS) Survey

Name _____ Rank _____ Branch _____
(last, first, middle initial)

1. To which peace operations have you deployed? Place a "1" in Column 1 of the table next to your earliest peace operations deployment; if you have deployed to more than one, then place a "2" next to your second and a "3" next to your third, as appropriate.

Name, Location and Dates Of Operation	Column 1	Column 2	Column 3	Column 4
	Peace Operation(s) To Which I Have Deployed ("1", "2", or "3")	Length of Time I was Deployed ("A," "B," "C," "D," etc.)	Type of Organization Deployed With ("C," "CS," "CSS" or "O")	My Rank at the Time of Deployment (1LT, CPT, SFC, etc.)
Example Peace Operation Someplace (1990-92)	1	D	CS	CPT
UNOSOM I Somalia (1992-93)				
Restore Hope Somalia (1992-93)				
UNOSOM II Somalia (1993-95)				
Uphold Democracy Haiti (1994-95)				
UN Mission in Haiti (UNMIH) Haiti (1993-96)				
Able Sentry Macedonia (1993-97)				
Joint Endeavor Bosnia/Croatia/Hungary (1995-97)				
Multinational Force Observer Sinai (1981-1997)				
Other (Print name, location, dates)				

2. For how long were you deployed? Enter the length of your deployment in Column 2 of the table based on the following code:

A = less than one month C = 3 to 6 months E = 9 to 12 months G = 15 to 18 months
 B = 1 to 3 months D = 6 to 9 months F = 12 to 15 months H = more than 18 months

3. In what type of organization did you deploy? Enter the appropriate code in Column 3 of the table:

C = Combat Arms (Infantry, Armor/Cavalry, Field Artillery, Special Forces, Aviation, Corps of Engineers Air Defense Artillery)
 CS = Combat Support (Chemical, Civil Affairs, Psychological Ops, Military Intelligence, Military Police, Signal Corps)
 CSS = Combat Service Support (Adjutant General, Acquisition, Chaplain, Finance, Judge Advocate, Medical, Ordnance, Transportation, Quartermaster)
 O = Other (Echelon-Above-Corps Staff, Center for Army Lessons Learned (CALL) Team, etc.)

4. At what rank did you serve during your deployment(s)? Enter your rank at the time of deployment in Column 4 of the table.

The example in the top line of the table illustrates how entries should be made for an 8-month deployment as part of an MP company to Someplace. The deployment to Someplace was the first deployment to a peace operation for the Captain making the entry.

Circle one response to the following questions:

5. As a result of participating in the peace operation(s), my self-discipline

decreased decreased stayed about increased increased
 a lot a little the same a little a lot

6. As a result of participating in the peace operation(s), my initiative

decreased decreased stayed about increased increased
 a lot a little the same a little a lot

7. As a result of participating in the peace operation(s), my decision-making ability

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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8. As a result of participating in the peace operation(s), my leadership skills

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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9. As a result of participating in the peace operation(s), my ability to function for a sustained period in an austere environment

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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10. As a result of participating in the peace operation(s), my ability to carry out a future combat mission

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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11. As a result of participating in the peace operation(s), the discipline of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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12. As a result of participating in the peace operation(s), the initiative of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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13. As a result of participating in the peace operation(s), the decision-making ability of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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14. As a result of participating in the peace operation(s), the leadership skills of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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15. As a result of participating in the peace operation(s), the cohesion of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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16. As a result of participating in the peace operation(s), the ability of U.S. soldiers I worked with to function for a sustained period in an austere environment

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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17. As a result of participating in the peace operation(s), the ability of U.S. soldiers I worked with to carry out a future combat mission

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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18. How many times have you deployed to the National Training Center (NTC), the Joint Readiness Training Center (JRTC) or the Combat Maneuver Training Center (CMTTC) as a member of the rotational unit (i.e., the "BLUEFOR")? For instance, if you have deployed 1 time to NTC and 2 times to JRTC, you should circle "3".

0	1	2	3	4	more than 4
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If you answered "0" to question 18, you have completed the survey. Please place the completed questionnaire in the box of MAJ Martins, Room 158 of Eisenhower Hall, drop it off in the Development and Assessment Office in Bell Hall Room 133, or place it in distribution for "MAJ Martins, CGSC Student, Section 12." If you did not answer "0," proceed to the next page.

19. As a result of participating in NTC/JRTC/CMTC rotation(s), my self-discipline

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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20. As a result of participating in NTC/JRTC/CMTC rotation(s), my initiative

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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21. As a result of participating in NTC/JRTC/CMTC rotation(s), my decision-making ability

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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22. As a result of participating in NTC/JRTC/CMTC rotation(s), my leadership skills

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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23. As a result of participating in NTC/JRTC/CMTC rotation(s), my ability to function for a sustained period in an austere environment

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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24. As a result of participating in NTC/JRTC/CMTC rotation(s), my ability to carry out a future combat mission

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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25. As a result of participating in NTC/JRTC/CMTC rotation(s), the discipline of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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26. As a result of participating in NTC/JRTC/CMTC rotation(s), the initiative of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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27. As a result of participating in NTC/JRTC/CMTC rotation(s), the decision-making ability of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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28. As a result of participating in NTC/JRTC/CMTC rotation(s), the leadership skills of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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29. As a result of participating in NTC/JRTC/CMTC rotation(s), the cohesion of U.S. soldiers I worked with

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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30. As a result of participating in NTC/JRTC/CMTC rotation(s), the ability of U.S. soldiers I worked with to function for a sustained period in an austere environment

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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31. As a result of participating in NTC/JRTC/CMTC rotation(s), the ability of U.S. soldiers I worked with to carry out a future combat mission

decreased a lot	decreased a little	stayed about the same	increased a little	increased a lot
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APPENDIX D

SURVEY RESPONSES—PEACE OPERATIONS

As a result of participating in the peace operation(s), my self discipline:

	Frequency	Percent
Stayed about the same.	60	66.7
Increased a little.	20	22.2
Increased a lot.	10	11.1
Total	90	100.0

As a result of participating in the peace operation(s), my initiative:

	Frequency	Percent
Decreased a little.	6	6.7
Stayed about the same.	42	46.7
Increased a little.	24	26.7
Increased a lot.	18	20.0
Total	90	100.0

As a result of participating in the peace operation(s), my decision-making ability:

	Frequency	Percent
Stayed about the same.	37	41.1
Increased a little.	41	45.6
Increased a lot.	12	13.3
Total	90	100.0

As a result of participating in the peace operation(s), my leadership skills:

	Frequency	Percent
Stayed about the same.	41	45.6
Increased a little.	41	45.6
Increased a lot.	8	8.9
Total	90	100.0

**As a result of participating in the peace operation(s), my ability to function
for a sustained period in an austere environment:**

	Frequency	Percent
Decreased a little.	3	3.3
Stayed about the same.	36	40.0
Increased a little.	37	41.1
Increased a lot.	14	15.6
Total	90	100.0

**As a result of participating in the peace operation(s), the discipline of U.S.
soldiers I worked with:**

	Frequency	Percent
Decreased a little.	7	8.0
Stayed about the same.	46	52.9
Increased a little.	25	28.7
Increased a lot.	9	10.3
Total	87	100.0

As a result of participating in the peace operation(s), the initiative of U.S. soldiers I worked with:

	Frequency	Percent
Decreased a little.	8	9.2
Stayed about the same.	33	37.9
Increased a little.	35	40.2
Increased a lot.	11	12.6
Total	87	100.0

As a result of participating in the peace operation(s), the decision-making ability of U.S. soldiers I worked with:

	Frequency	Percent
Decreased a little.	1	1.1
Stayed about the same.	34	39.1
Increased a little.	43	49.4
Increased a lot.	9	10.3
Total	87	100.0

As a result of participating in the peace operation(s), the leadership skills of U.S. soldiers I worked with:

	Frequency	Percent
Decreased a little.	3	3.4
Stayed about the same.	32	36.8
Increased a little.	45	51.7
Increased a lot.	7	8.0
Total	87	100.0

As a result of participating in the peace operation(s), the ability of U.S. soldiers I worked with to function for a sustained period in an austere environment:

	Frequency	Percent
Decreased a little.	6	7.0
Stayed about the same.	25	29.1
Increased a little.	40	46.5
Increased a lot.	15	17.4
Total	86	100.0

As a result of participating in the peace operation(s), the cohesion of U.S. soldiers I worked with:

	Frequency	Percent
Decreased a little.	6	6.9
Stayed about the same.	16	18.4
Increased a little.	42	48.3
Increased a lot.	23	26.4
Total	87	100.0

APPENDIX E

BRANCHES AND DEPLOYMENTS OF OFFICERS SURVEYED

Branch		
	Frequency	Percent
IN	12	13.3
AR	5	5.6
FA	9	10.0
EN	3	3.3
MI	7	7.8
SF	8	8.9
TC	5	5.6
AG	1	1.1
OD	6	6.7
AV	8	8.9
QM	5	5.6
SC	8	8.9
CC	2	2.2
JA	1	1.1
MC	1	1.1
FI	2	2.2
DE	1	1.1
MP	3	3.3
AD	1	1.1
CH	1	1.1
MS	1	1.1
Total	90	100.0

Peace Operations Deployments of Surveyed Officers

Somalia	14
Haiti	42
Macedonia	2
Bosnia	45
Sinai	6
Total	109

APPENDIX F

SURVEY RESPONSES—COMBAT TRAINING CENTERS

**As a result of participating in NTC/JRTC/CMTC rotation(s), my
self-discipline:**

	Frequency	Percent
Stayed about the same.	23	41.8
Increased a little.	27	49.1
Increased a lot.	5	9.1
Total	55	100.0

As a result of participating in NTC/JRTC/CMTC rotation(s), my initiative:

	Frequency	Percent
Decreased a little.	1	1.8
Stayed about the same.	19	34.5
Increased a little.	26	47.3
Increased a lot.	9	16.4
Total	55	100.0

**As a result of participating in NTC/JRTC/CMTC rotation(s), my
decision-making ability:**

	Frequency	Percent
Decreased a little.	1	1.8
Stayed about the same.	5	9.1
Increased a little.	30	54.5
Increased a lot.	19	34.5
Total	55	100.0

**As a result of participating in NTC/JRTC/CMTC rotation(s), my
leadership skills:**

	Frequency	Percent
Stayed about the same.	10	18.2
Increased a little.	31	56.4
Increased a lot.	14	25.5
Total	55	100.0

**As a result of participating in NTC/JRTC/CMTC rotation(s), my ability to
function for a sustained period in an austere environment:**

	Frequency	Percent
Decreased a little.	1	1.8
Stayed about the same.	21	38.2
Increased a little.	25	45.5
Increased a lot.	8	14.5
Total	55	100.0

**As a result of participating in NTC/JRTC/CMTC rotation(s), the discipline
of U.S. soldiers I worked with:**

	Frequency	Percent
Decreased a lot.	1	1.8
Decreased a little.	1	1.8
Stayed about the same.	13	23.6
Increased a little.	36	65.5
Increased a lot.	4	7.3
Total	55	100.0

**As a result of participating in NTC/JRTC/CMTC rotation(s), the
initiative of U.S. soldiers I worked with:**

	Frequency	Percent
Decreased a lot.	1	1.8
Decreased a little.	2	3.6
Stayed about the same.	13	23.6
Increased a little.	32	58.2
Increased a lot.	7	12.7
Total	55	100.0

**As a result of participating in NTC/JRTC/CMTC rotation(s), the
decision-making ability of U.S. soldiers I worked with:**

	Frequency	Percent
Decreased a lot.	1	1.8
Decreased a little.	1	1.8
Stayed about the same.	11	20.0
Increased a little.	34	61.8
Increased a lot.	8	14.5
Total	55	100.0

**As a result of participating in NTC/JRTC/CMTC rotation(s), the
leadership skills of U.S. soldiers I worked with:**

	Frequency	Percent
Stayed about the same.	12	21.8
Increased a little.	35	63.6
Increased a lot.	8	14.5
Total	55	100.0

As a result of participating in NTC/JRTC/CMTC rotation(s), the ability of U.S. soldiers I worked with to function for a sustained period in an austere environment:

	Frequency	Percent
Decreased a little.	3	5.5
Stayed about the same.	14	25.5
Increased a little.	31	56.4
Increased a lot.	7	12.7
Total	55	100.0

As a result of participating in NTC/JRTC/CMTC rotation(s), the cohesion of U.S. soldiers I worked with:

	Frequency	Percent
Stayed about the same.	8	14.5
Increased a little.	32	58.2
Increased a lot.	15	27.3
Total	55	100.0

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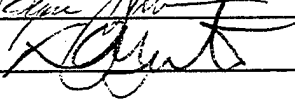
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